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A
SERIES OF CALISTHENIC
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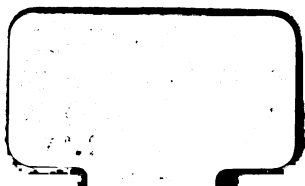


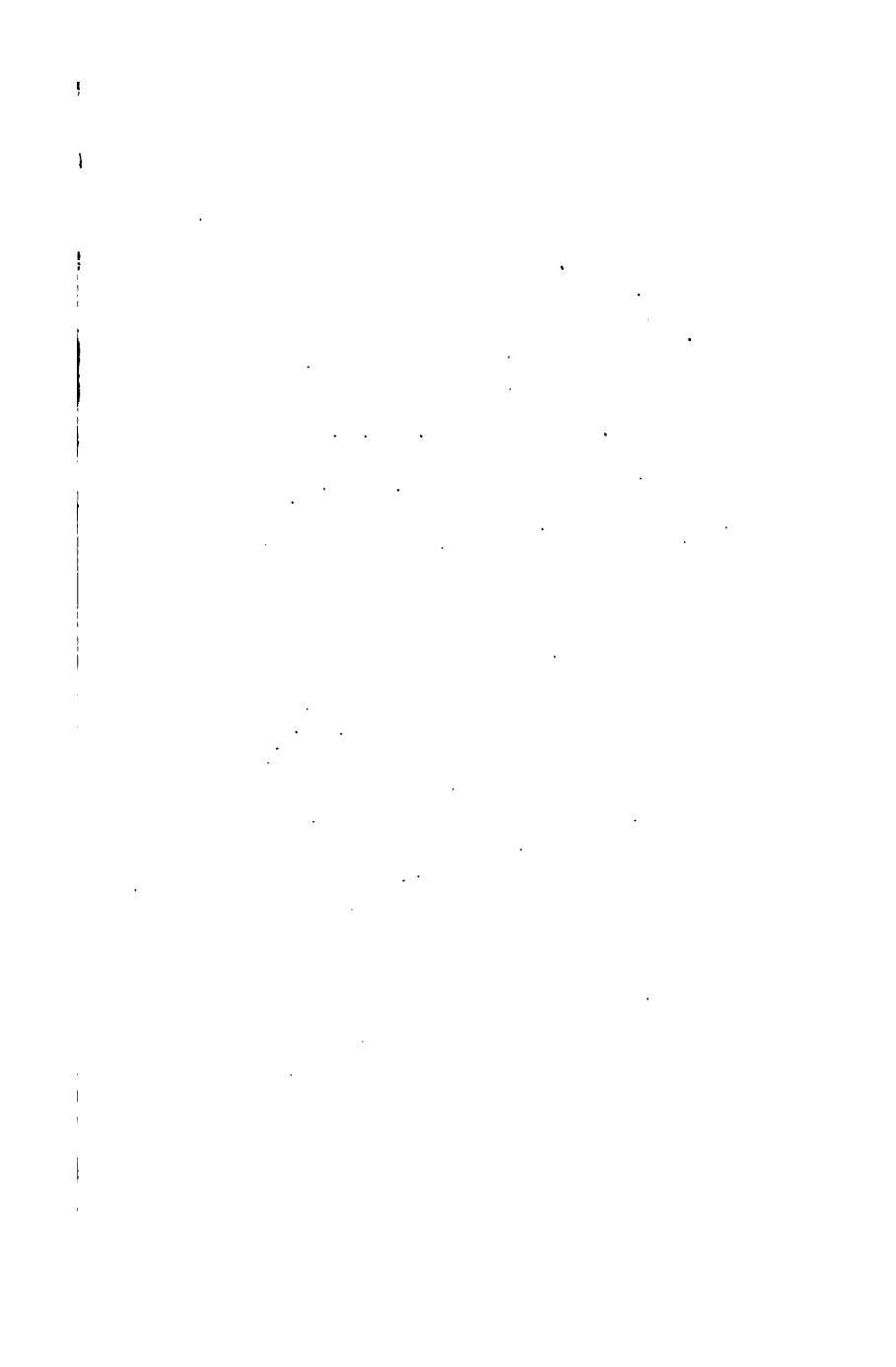
BY ROBERT S. THOMSON.

R. GRIFFIN & CO. GLASGOW & LONDON.



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A SERIES

OF

CALISTHENIC AND HYGIENIC EXERCISES.

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AND
HYGIENIC EXERCISES &c &c



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Printed by J. Macdonald & Co.



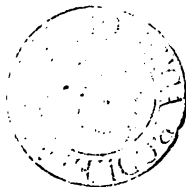
A SERIES
OF
CALISTHÉNIC AND HYGIENIC

EXERCISES,

&c. &c. &c.

BY R. S. THOMSON,

PROFESSOR OF DANCING, GLASGOW.



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TO
HIS FORMER PUPILS,
AND THE
YOUTHFUL AND MATURED PORTIONS OF THE COMMUNITY,
FOR THE ESTABLISHMENT OR RESTORATION
OF WHOSE HEALTH
THESE EXERCISES ARE SPECIALLY ADAPTED,
THIS WORK
Is respectfully Inscribed,
BY
THE AUTHOR.

PREFACE.

I HAVE often regretted when my connection with my pupils has terminated, that the benefits of Calisthenic Exercises should promise to be so short-lived and evanescent, through their forgetting the various evolutions in which I have had the honour of imparting instruction. I have exulted in the honest pride not only of a professor, but of a philanthropist, as I have noticed day by day the gradual dawning of health on many a pale face; and on many a one of ordinary health, the gradual signs of robustness and vigour which my attentions have been instrumental in bringing about. I have rejoiced to notice the healthy growth and development of many hundreds of children, and been proud to attribute it to the exercises in which they have been engaged under my tuition: with no less pleasure have I observed the successful application

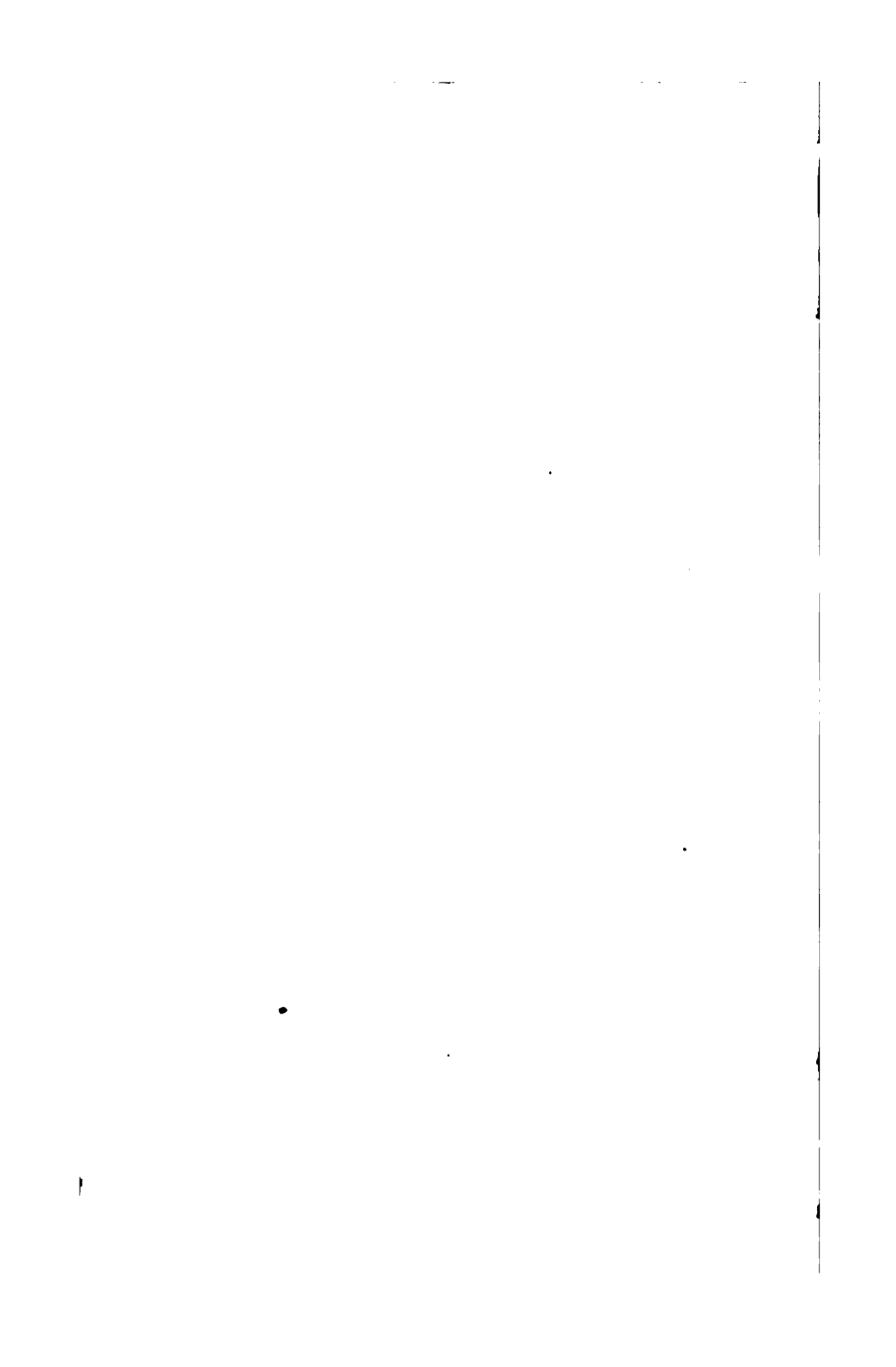
of the principles of the Calisthenic art in the case of ill health, and threatened consumption in youth: in dyspepsia, nervousness, melancholy, and a host of evils to which persons of a more matured age have been subject: and in gout and other maladies of persons who have attained the full complement of threescore years and ten. The thought of having been the means of laying the foundations of permanent health and enjoyment in the young—of substituting health for disease and the prospect of life and comfort, for the apprehension of the tomb in the more matured—all this has been to me a source of never-failing pleasure. And yet with it all there has been mingled a bitter regret. The thought that on the cessation of my instructions, they should be neglected for a while, and then when the necessity of their continued aid is felt, that they should be obliterated from the memory, this caused me on the one hand to deplore the frail tenure of all happiness on my part and of benefit on the part of others—but on the other hand, with the instinct of a practical mind to devise a remedy. Such is the present publication. A few of the most valuable Exercises have been hastily committed to paper, for the benefit of those whom I am now about

to cease to have the honour of instructing, and such others as shall in future desire to perpetuate the advantages derived from my tuition—not forgetting the pupils of former days, to whom, conjointly with the aforesaid, I have dedicated the result of my labours.

The short time that my professional engagements have left for the preparation of this little book, and the haste with which it has necessarily been brought before the world, must be the apology for such imperfections as I am well aware exist in it.

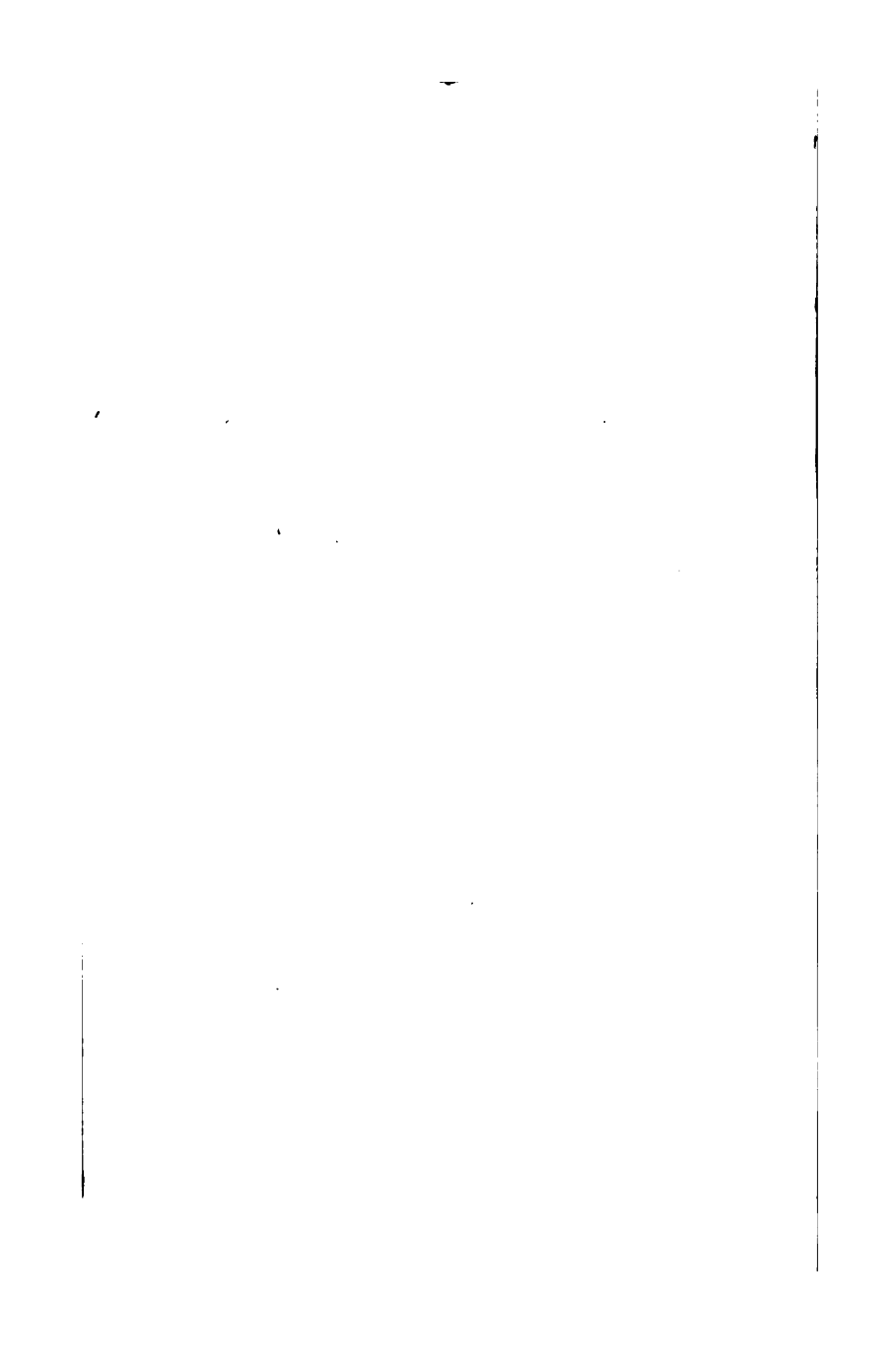
I can only hope that it will be received with the same good-will as that with which it is now with grateful confidence committed to the world.

DANCING ACADEMY,
227 Sauchiehall-Street, Glasgow.



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INTRODUCTION.

It was just before the time of Hippocrates that Gymnastic Exercises had received such attention as to branch off into a series of developments, adapted to remedy various kinds of diseases; and accordingly he assigns them a prominent place in his system of Analeptics. But long prior to this time their beneficial tendency had been tested, and universally admitted. While social and political organizations were in their infancy, perfect physical training was the rule, and debility the exception. The state depended on each individual for immunity from hostile incursions, or safety against invaders. Standing armies were unknown beyond an occasional body-guard around the person of a despot. The whole nation was the army; and the cultivation of warlike prowess involved active exercise from infancy itself. Proficiency in preparatory exercise afforded a promise of success in war, and

was therefore in high estimation. As early as the Trojan war, we read in the second book of the *Iliad*, that quoits and javelin hurling constituted the amusement of the armament. This of course does not indicate a definite period at which such exercises became common: it merely points to their great antiquity; indeed the probability is that the very rudest forms of society would pay greatest attention to these matters, especially if we could receive the theory of Hobbes, that it was not benevolence but mutual fear and mistrust that originated organized society. Again in the twenty-third book, funeral games are mentioned on the death of Patroclus, in which trials of strength and dexterity were made, and rewards given to the victors. Virgil attributes similar amusements to the times immediately succeeding these.

When at length the Grecian autonomies were consolidated, warlike skill was as necessary to resist their neighbours as to prevent their succumbing altogether to a foreign foe. The fact of small states resolutely maintaining their isolation and independence, necessitated the warlike education of every member of the community, and it was in consequence of this universal and systematic train-

ing that they realized that beautiful symmetry of form, which for us exists only in the ideal, or in the forms of divinity which they sculptured from figures of such perfect proportions.

The Olympic, Isthmæan, Nemæan, and other festivals on which the neighbouring states assembled in common, were thus naturally devoted to the subject which was of universal interest; and the contest for superiority in various athletic exercises, was regarded as of national moment. Although the prize were but a perishable wreath—the victory was an imperishable honour, and the champion who gained it, as the representative of his country, generally received many substantial marks of public favour.

The Lacedæmonians were specially characterized by their attention to military training. They even forbade walls to their city, regarding its true safety as placed in the valour and vigilance of the citizens. Every child was considered as belonging to the state, and trained accordingly; nor was any distinction of sex made in regard to exercises. Boxing, wrestling, swimming, &c., were early mastered by them all, and it was the greatest reproach to say of a person, he can neither write nor swim.

Plato (*Laws*) informs us that the Lacedæmonians first built a Gymnasium, the Athenians next. There were three in the neighbourhood of Athens: the Academia, where, among the pleasant walks and throng of visitors, Plato taught his disciples; the Lyceum, where Aristotle resorted; and the Cynosarges, of less importance.

Their transcendent importance was recognised not only by the poets, but the most acute and learned philosophers did not consider it beneath their dignity to write upon them. Plato (*Pol. lib. iii., Laws viii.*) Aristotle (*Pol. lib. viii.*) The stress laid upon Gymnastics by Solon, appears also from Herodotus (i. 34.) It would be easy to multiply instances, but we pass on to notice that this state of things afterwards degenerated, and instead of noble youths emulating each other in the patriotic cultivation of prowess, it was left to a mercenary race of men called Athletæ, who were little better than prize-fighters; or as some have remarked with as much causticity as truth, "they were no better than game cocks, and trained for no better purpose."

At Rome too, while the integrity of the republic was preserved, the warlike games, and athletic

exercises of the Campus Martius, were regarded as the most fitting sphere of the free-born youth. Commerce, the arts, and even literature ranked among inferior employments, and until a late period were generally represented by slaves. When, however, the tide of wealth had set in upon the nation, and despotism had annihilated almost every patriotic sentiment, these exercises fell into desuetude and decline, except among the standing army which had been gradually formed.

Of the barbarians who overthrew the Roman empire we know but little. Their habits, however, were neither artificial nor refined, and strength conjoined with agility, to judge from the records which have come down to us, was in a high state of perfection among them. Historians relate with astonishment the manner in which by the aid of their *frameæ* they overleapt a whole array of pikes; and Tacitus (Germ.) describes a species of dance somewhat resembling the northern sword-dance so vividly described by Sir Walter Scott in the "Pirate," in which they moved among naked weapons, in a series of evolutions which displayed at once astonishing agility and precision, together with a quickness of eye which alone could guide

them in safety in such a perilous labyrinth. There is little doubt, from the relationship of the races, that the one people had traditionally received the dance from the other. Similar methods of exhibiting warlike skill are narrated by Layard. The young Arabs would point their lances to his breast and charge up at the utmost speed of their horses, removing them just at the right moment, as if by magic. It was a signal mark of distinction, and of course he could only submit to it with the best grace possible under the circumstances; still it is not strange that the possibility of a horse stumbling, or a slight disturbing cause of a thousand kinds, should have presented itself: the consequence would have been inevitable.

In the middle ages strength and valour were highly necessary, and the jousts and tournaments are indicative of national predilections; the fair sex themselves taking an active interest in the matter. A long course of training was necessary, and in nothing was the perfection of force and agility better demonstrated than in tilting at the pivotted beam, where an unskilful blow, or a total failure, equally resulted in doleful effects on the head of the tyro.

The state of physical training in England about the seventeenth century is graphically portrayed by Sir Walter Scott in the "Fortunes of Nigel;" and the archery of an earlier period is recalled at once by the names of Lockesley and Ivanhoe. The same powerful pen has pictured "putting the stone" and "throwing the hammer," and it would be totally superfluous to refer specially to the contest between Norman Nan Ord and Hal-o'-the Wynd.

In the last century the causes which retarded other improvements tended to the resuscitation of Physical Training. Rousseau showed himself in this matter a good theorist, and extended his co-operation for the advancement of the art, so far as heartily to lament and deplore in his "Emile" the neglect of the corporeal structure which had befallen his times.

The French Revolution, in the countless influences which it brought into operation, by terrifying the German government on the score of social dislocation and anarchy, and subsequently the astounding conquests of Napoleon, by alarming all the nations of the continent, alike tended to point out the necessity of training the youth of the

kingdom in such exercises as should prepare them to resist the common foe. Physical development assumed instantaneous importance as a branch of education, and the results though partial, were most satisfactory. Dalzman, a German clergyman, took the initiative in the movement and gallantly led the van. Guts Muths also by his powerful writings enlisted the public sympathies still further. And at length about 1811, Dr. Jahn established his first Turnplatz (Gymnasium) near Berlin. The universal panic caused by the victorious career of Buonaparte, and the desire to oppose an effectual resistance to the French armies, brought large accessions of students to the seminary continually. The Prussian government instituted an inquiry into the physical effects of this establishment, and the physicians who conducted the investigation reported most favourably with regard to it; but like most German institutions of the kind, its proceedings soon assumed a political complexion, and it was suppressed.

The importance of these schools rendered them everywhere acceptable. And in the year 1824, Volker, a political refugee, opened one in London, which attracted a fair share of public interest.

About the same time, Cleass, a native of Switzerland, founded a similar establishment at Chelsea, in connection with the Royal Military Asylum.

The subject acquired importance even beyond the Atlantic, and Beck, a pupil of Dr. Jahn, in 1825, opened a gymnasium in Northampton, Massachusetts.

Having now fairly taken root, it was to be expected that abuses should mingle with the benefits of the system; notwithstanding which it gradually progressed both in excellence and in the number of its partizans. The whole of education was being remodelled, and useless antiquated methods giving way before new and enlightened principles.

In ladies' schools Calisthenics were received as an essential requisite in bodily training; tending to bring the figure into a state of beauty and vigour otherwise unattainable, as well as to impart health—the greatest boon that could be conferred; extending its beneficent results through every subsequent action in life, to a hale old age. But the principle that was adopted appeared to regard all organizations as equally and most unfortunately prone to abnormal formation. Accordingly the

stocks were invented, and pupils were required to stand so many hours a day, with the toes preposterously turned out, to such an extent indeed that nature was defied, and deformity itself outraged. Not to dwell on other unnecessary instruments of indiscriminate torture, we will merely pass on to the ameliorated notions of these points. The formation of right postures has been found to depend on practice; on the gradual laxation of the joints which had a wrong tendency, not by a process of stretch and strain, but a gradual employment of nature's own method—healthy exercise, directed by art and experience. The following exercises are resorted to by persons of various ages, and for various purposes. They have been successfully employed in the case of children of both sexes—strengthening the muscles, invigorating the frame, promoting the growth, and in short preparing them for an arduous life, free from subjection to constant cold, debility, prostration and illness, by means of the acquired capability of supporting toil. The tendency to deformity has also been combated with the most encouraging results, and the increasing confidence of the world at large in the system of remedial analeptics, tends more than a host of

arguments, to prove what the instructor and physician might otherwise have laboured in vain to establish. Crooked limbs and distorted figures are not to be cured by medicines ; the utmost they can do is to bring the system into a state of such vigour, as to render the exercises efficient ; to impart such energy to the powers of nature that they may, when directed by art into a right channel, operate successfully.

The grand boast of Calisthenics is their power to prevent disease and deformity. This will receive full consideration in its place.

Again, the student by resort to these applications of nature's remedies, has often lost his lassitude and incapacity for bodily or mental exertion. The young lady, frail and delicate as a creation of the fancy itself, through judicious guidance in rousing by natural means the dormant powers of the system, gradually discovers that nature is easily propitiated, when she is not altogether trampled upon and neglected ; the roses begin to glow on her cheeks, in place of a consumptive pallor ; headaches and weariness are superseded by health and vigour, and melancholy is drowned in a flood of buoyant spirits.

The merchant and the victim of professional decrepitude have alike resorted to this method for relief from dyspepsia, melancholy, sickness, acidity, and a host of minor evils. And even in old age it is not unfrequent for individuals who have indulged too freely in the pleasures of the table, and consequently become martyrs to gout, rheumatism, &c., to adopt even at the eleventh hour a course which would have saved them altogether in the earlier stages. It is a fact that many of the aged nobility and gentry, and the leading characters in the nation, are seeking under the direction of the Hygienic instructor, the only relief in their power against the pangs of gout and other evils. The fact is that without such a course, the vital parts would soon be affected and life terminated.

The difference between the child accustomed to exercise, and the victim of confinement, is too palpable, and is illustrated by too many instances to need special exemplification. In youth the thousands of victims who yearly yield to the fell destroyer, Consumption—most of whom, perhaps nearly all, would have been saved by early attention to health and vigour—these, together with the pale, haggard faces that are ever recurring to an observer

of the upper and middle classes of society, demand proper exercise for all, at the crisis of health, the turning point of the constitution.

To conclude this introduction, an example of the effects of exercise on the aged or inveterate gourmand, or, what is very similar, the literary devotee, will be furnished us by the wisdom of the sages of other days:—

Ogul was afflicted with a variety of disorders. He neither relished his food nor possessed an appetite; his vision was obscure, his face pallid, and his whole frame listless and enervated. It was declared that he should recover on eating a basilisk steeped in rose water. Accordingly his servants searched the length and breadth of the land to find a basilisk, but without success; at length a sage was found who provided a ball, wherein he said a basilisk was concealed; the patient was to strike it repeatedly, while it was as often returned to him, so that by means of the perspiration produced, it was pretended that the virtues of the basilisk would day by day transude into his body; meantime he was to drink only rose water. After one day of the exertion the treatment was found to have resulted in extreme fatigue, and a refreshing sleep followed;

the next day found the noble patient better fitted for his task, and a still more invigorating repose ensued. At length he was cured, and the sage adviser explained that no such thing as a basilisk existed; that all that was demanded by the ailments in question was a temporary repose of the stomach, which it received during the diet of rose water; and that the only use of the ball was to facilitate the necessary exercise.

THE NECESSITY
FOR
CALISTHENIC EXERCISES.

OF all the educational improvements which have marked the present age, none is more important than the attention which is now bestowed upon physical training.

As civilization advanced, mankind became more and more impressed with its most salient feature, the superiority of mind over matter, the preponderance of art and skill, in comparison with which mere brute force was of no avail whatever. Accordingly, rushing at once to the extreme, they aimed at intellectual superiority, and esteemed it not only the chief but the only end of education. As soon as a child could speak, it was initiated into the

mysteries of the alphabet, and as many rhymes, proverbs, and apophthegms, together with as much of other elementary learning, as by the most assiduous forcing could be crammed into its memory: and according to its progress at this stage it was either a dunce or a prodigy. If only the child had a retentive memory—if its recitations were only lengthy and numerous enough to astonish polite visitors, or exhaust the patience of those less interested in juvenile exhibitions; no matter that its face were pale, its eyes languid, and its frame delicate; it was an object of unqualified pride to its educators. The same system was pursued at school, unless the voluntary hygienics of his playmates induced him to join in their sports and share their vigorous health and animation, for the benefits of which, thanks were due to any one rather than the educator. And what was the consequence? it became a rule almost without an exception that a man of literary eminence should be thin, pale, and weak; while in many instances the mind at length sympathized with the debilitated functions of the body, and drooped into melancholy or insanity; or at best, escaping this fate, a literary character was esteemed a phrase unfortunately equivalent to a

confirmed invalid. Truth, however, has at length to some extent vindicated its claims; and, taught by sad experience of consumption and premature decline, mankind have begun to recognize the compound nature of man: the fact has been forced upon them, that though the body be only the instrument of the soul, yet it must be in a state of vigorous efficiency if mental operations are to be successfully carried on. Health is only another name for vigour and perfection, more or less absolute in the physical structure; and this one word in its thousand associations throws a flood of light upon the subject, and substantiates our position more than a whole folio of argument. Let a man be engaged in business: without health, how can he meet the various exigencies which are sure to arise? In order to succeed, he must be equal to continuous effort,—he must be able to grapple with a host of difficulties; and how can this be effected without health? When poverty has been brought on by the impossibility of bestowing the unwearied attention which his affairs demanded, it is too late for a man to lament the want of early physical training: when a flourishing business has to be

abandoned, from sheer want of energy to carry it on, regrets, however bitter, are unavailing.

Let a man enter one of the learned professions, and without the capability of day and night work, it will be impossible for him to attain to eminence; and when, in addition to his own interest, the property and even the lives of others are involved in his capability of protracted mental exertion, nothing can equal the poignant anguish with which he finds himself inadequate to the task through bodily prostration, while by the same misfortune every avenue to fame is closed against him.

The fair sex have a still greater interest in the subject. They are naturally prone to be delicate, and what is of more consequence, the refinements of civilized life discountenance the active exercise which is the surest road to health and strength.

The cause of illness and debility is generally no mystery to the sufferers. If they were asked to define the best system of Hygiene, they would answer, pure air, active exercise, and early hours; yet, in spite of this knowledge, the greater part of them are found constantly in hot and crowded assemblies, and instead of adopting "nature's kind

restorer" healthful walking, they loll in carriages, while as for early hours, their day begins near sunset, and ends at day-break. Having all those foes to contend with, the wonder is not that health is so rare, that pale faces and languid eyes are so frequently observable—the wonder is that anything else but disease is known. Now it is useless for physicians to declaim against these practices, and for us to echo their sentiments. A sin against fashion is for some time regarded as of far more consequence than a sin against health, especially as the one is supposed to be more readily retrieved than the other. What is to be done then? The only course perhaps is to wait till "health shall come into fashion;" till these two discordant elements shall enter into an offensive and defensive alliance; a consummation devoutly to be wished, and one too which appears at least to have made some progress, since the highest authorities in the realm have lent their countenance to the movement.*

* The daily exercise taken by the Royal Family is well known. They rise early, and the day is mapped out for the junior members, with almost military precision: a considerable portion of it being systematically devoted to physical training, under competent instructors. It is also a significant circumstance that an elegant pair of skates have been recently manu-

But what is to be done meanwhile? Two methods suggest themselves: the one in the shape of prevention; the other under the guise of alleviation;—the one being employed during childhood, the other during youth and the early adult age. By the steady prosecution of both, in the face of all these adverse agencies, a moderate share of health may be reasonably expected. In each case exercise is the grand instrument. In the one, aiding the structural development, and infusing into the system such vigour and capability of exertion as shall generally supersede the danger of subsequent debility and prostration; in the other, fortifying the constitution against unpropitious influences, or removing their prejudicial effects.

Our arguments will carry the more weight if we bring to bear on the subject the revelations of medical science in these particulars.

factured for Her Majesty the Queen. The wisdom of this course is demonstrated by the unparalleled health which distinguishes the whole of the Royal Family.

The Empress of the French, likewise, by the direction of her physician, has lately used skates fitted with wheels, with which she skims over the polished floors of the Tuileries.

THE PHYSICAL STRUCTURE DEMANDS EXERCISE.

WHEN a machine is much used, after a time, its working powers are impaired, and its general efficiency deteriorated. If this were the case with the body, it would soon assume the appearance of prostration and decay; a few months or years of exercise would wear it down to a state of utter and absolute uselessness. But the reverse is the fact: by a wise and beneficial arrangement, the Creator has provided for the constant renovation and repair of the system—not only in its motive power, as exemplified in the steam engine, but by a provision for the restoration, and corroboration of every part of the economy, as well those employed in thought, as the several constituent parts of the brain, and in supplying the wants of the system as the heart and lungs, as also those external organs

which are more directly subjected to our cognizance in exercise and locomotion.

Further, he has associated the constant wear and tear of these organs, and their subsequent renovation, with the health and efficiency of the members themselves, and of the system at large. The very wear of the muscles, is nothing less than the separation of effete and injurious matter from their substance, and, by thus detaching the deleterious matter, creating an opening for the reception of the fresh and invigorating elements supplied by the blood in its circulation to these parts. And this is not an abnormal or diseased state: it is the constant and necessary sequence of the constitution of the body. However healthful be the materials communicated to the several departments of the frame, however well they may be incorporated with its substance, they are only useful for a time; their office is not to supply a permanent and inalienable part of the structure, but by means of the living vivifying nature with which they are invested, to assist in carrying on the several functions of the organs with which they are connected: when their virtue is exhausted, they are no longer useful, nor even harmless; they no longer exert an energy for

the benefit of the organ, but clog and cumber its movements with an inert and positively deleterious mass of lifeless matter. How then is it to be removed? By the same means as those by which it was originally conveyed thither, the circulation of the blood, which not only distributes living elements throughout the body, but carries off the effete and noxious particles which have been used and then supplanted by others, as their predecessors had been superseded by themselves. This rule applies to all parts of the body, though they do not all undergo the process with the same rapidity,—the muscles, for instance, being subject to constant change; the bones participating in it very slowly indeed. However, the consequence is, that in the course of time, not one single particle exists in the body which was in it a certain time previous, and of all that now enter into its composition, not one will be associated with it at a certain future time. The period that must elapse before every atom now in connection with the system shall have passed off from it and given away to others, is, of course, determined by circumstances; the state of the circulation and the general health will tend to modify it, and it is more rapid in young persons

than in adults. Some physicians have even supposed it possible in as short a space as six months, while others specify as many years: however this be, the fact is equally clear and palpable that the due circulation of the blood will alone promote the healthfulness of the several parts, by imparting materials for growth and strength, and transporting elsewhere the superfluous and uncongenial remains of the former structure; and this, in addition to further benefits, which we shall now proceed to elucidate by a somewhat detailed consideration of these operations: but let this be remembered, that all these benefits flow from the due circulation of the blood, and this, as every one knows, depends upon exercise.

The blood is circulated through the system by means of the heart's action; previously, however, it has been subjected to the action of the atmosphere in the lungs; being spread out through a series of fine vessels, through the thin skin of which the air permeates, and imparts its oxygen to the blood, while it receives the impurities which have been collected throughout the system, to be expelled by breathing. They consist chiefly of carbon; and the carbonic acid which is thus given out in respira-

tion, is a rank poison; hence arises an obvious corollary in reference to the prejudicial effects of crowded assemblies after a certain time. And a further one in reference to the subject on which we are insisting all along,—exercise—since it is evident that exercise whether in walking, or calisthenics, or any other shape, quickens the respiration, and thus, as we have shown, throws off more effectually the elements of disease, which, in persons of a sedentary habit, are constantly lurking in every corner of the system.

But again, as to the beneficial effects of the pure air introduced into the lungs. Its chief benefit is attributable to the oxygen with which it is charged; the prominent characteristic of this gas is its life-giving and stimulating property: to such a degree does it possess this quality that it would be too much for the lungs to support it in a pure state; by the wisdom of the Creator it is therefore diluted in the atmosphere with another substance—nitrogen,—which modifies its effect. How then does the oxygen operate on the blood? It communicates to it its own peculiar activity and life-giving qualities: already disburdened of the feculent matters which it gathered in its course, and which imparted to it

the dark purple colour observable in the veins, that is, the channels through which the blood in its circuit returns to the lungs to be renovated and fitted for another circulation—in fact already prepared for this vivifying and quickening agent, the blood imbibes it and becomes oxygenated, assuming the bright red colour that distinguishes it, as it is pumped by the heart through the arteries to the remotest limbs and members. The bright red colour, then, is owing to this infusion of oxygen. How does the oxygen operate on the parts with which it comes in contact? Clearly by stimulating them, and imparting a new and vital energy. The result is twofold. In the first place the parts thus affected receive a power which fits them for vigorous action; and in the case of the muscles there is a vast increase in their contractile force, in virtue of which they call into motion the limbs and all parts of the body. Thus, immediately after waking in the morning, we feel the results of the slow and imperfect respiration which goes on during sleep; the muscles, though stronger than on the previous evening, feel weak and relaxed; and this effect is increased if the room should have been small, and the ventilation imperfect, as on board

ship, and still more if sleep has been unusually protracted. This feeling of debility is simply owing to the small quantity of the health-giving oxygen that has been disseminated through the system; after a short time, however, when the respiratory functions have been fully resumed, especially if fresh air be admitted, we become conscious of the invigoration and strength which has accrued during sleep, and which only required the stimulus of fresh air, that is, of oxygen, to be worked into the system, in order to be appreciated. So again, on commencing Calisthenic Exercises, or on setting out for a walk, there is often felt in almost every muscle of the body, a lassitude which threatens to render much exertion a sheer impossibility; yet after a while a freshness begins to quicken and enliven every limb, arising from the invigorating properties of the infused oxygen. A horse, too, as every one knows, is far more animated and in much better condition for travelling after a mile or two has been traversed on the journey.

But another element comes into operation. Exertion quickens the respiratory process. On respiration depends to a very large extent the heat of the body, which is generated in the lungs by the

constant chemical action involved in the act of breathing. It is nothing less than a slow combustion, and evolves a warmth which extends by means of the circulation to the whole body.

It follows then, necessarily, that exercise which quickens the respiration, should increase also the warmth of the system; and so indispensable is a due proportion of such warmth that the functions of life soon come to a stand-still without it.

Here then is another ground for the constant resort to exercise. A wise saw of the sages has been said to embody the whole of medicine, "A cool head—warm feet." The avoidal of excitement will accomplish the one—the other is only to be attained by exercise. When the circulation is in due operation, when habitual exercise has gradually strengthened the circulatory energies, the feet will no more be cold in winter than summer, at least where the constitution is sound; and where it is not, it is only an additional argument for the more sedulous and systematic attention to the course which alone can induce any approximation to so desirable an object. It is the height of absurdity to hear ladies complaining that "they are subject to cold feet," as though it were

a natural and inevitable evil, like epilepsy or blindness—as well might they complain that they are subject to occasional fits of hunger or thirst, or that, most unaccountably towards midnight, they have a tendency to sleep; the one is as evidently the voice of nature as the other; in the one instance there is a call for nutriment and repose, in the other there is a plain intimation that the fire of life is burning low, and needs stirring up into a healthful glow by active exercise.

But we spoke of a second benefit resulting from the introduction of fresh or oxygenated air into the lungs, and thus into the whole system. The muscles, for example's sake, upon which it takes effect, not only gain a strength and energy for discharging their functions as instruments of motion, but the power of renovation and increase is augmented just in proportion within certain limits—to the frequency of the recurrence of fresh and living elements to their structure; in other words, in proportion to the healthful circulation; and this we have shown to depend on systematic and regular exercise, which thus assumes a doubly important character. The rapid circulation does not merely extend to the time of exercise, but as

the whole economy gradually assumes a normal complexion, the circulation and warmth gradually extend further and further into the remaining part of the day, until the feebleness of the pulse and coldness of the extremities disappear altogether, and a genial glow pervades the whole system. Hence result benefits too numerous to be specified. The lungs themselves gain vigour and strength, and every breath is taken not in the feeble and partial manner which was once usual, but in a hale and hearty quaff that communicates life and buoyant energy to every corner of the frame. This becomes very evident when a labourer is closely observed, even although he be in an attitude of repose. The strong breath that is drawn, the immense quantity of air absorbed and given forth in respiration, well account for the florid cheek and the robustness that is stamped on every limb. The lungs necessarily participate in the benefit, whatever be the kind of exercise, because the act of breathing is accelerated by all; but it is the particular limb or limbs which are constantly employed that more specially give signs of improvement. The wear occasioned in their texture is followed by the acquisition of fresh and healthful material, so

that they rapidly increase in size and power. Thus, the arm of a blacksmith or prize-fighter attains remarkable size; the shoulders and loins, indeed the whole frame of porters, give evidences of the strength attained by their employment, since it calls into action so many muscles in such different parts of the body; and the stout limbs and ruddy complexion of the milk-maid, show that her sex is equally open to the benefits resulting from exercise.

Pure air is an indispensable accessory. This will follow from what has been already said. Since oxygen is the grand desideratum, such a place must be chosen as is sufficiently open and well ventilated; the sense of oppression resulting from a close room is well known, and exercise under such circumstances is productive of almost as much harm as good. The natural scene of activity is the open air; nowhere else is there equal purity and invigorating power; though our climate only allows of a partial recourse to it. It is here that, at least during the day-time, every tree and plant is contributing to the atmosphere its quota of life, and it is here that it is best inhaled.

Having investigated so far, we shall have no difficulty in accounting for the pale or sallow

countenances of those who seldom emerge into the pure air of heaven, and still less frequently work it into the system by active exercise ; and who perhaps add to these enormities, of themselves sufficient to account for almost any form of disease, the additional outrage upon nature, of cramped and light clothing, to complete the impossibility of proper respiration.

Look again on another picture and mark the contrast. Observe a village belle, whose figure has never been cramped by art ; to whom exercise has been as habitual as the inhalation of the pure air ; and as a natural consequence of the blood being constantly purified and renovated, we find the colour as fresh and ruddy as health and strength can make it.

But on the proper oxygenation of the blood depends another and more important element of health, viz., the vigour of digestion. All the world knows that exercise is the parent of appetite ; and yet, desiring the one they have recourse to anything rather than its natural cause in order to attain it. In the absence of such activity as is called for by the constitution of our frame, two classes of effects result. The one from the presence of impurities in

the apparatus, and the other from the want of the stimulating and active properties which would be communicated if the current of the blood were properly sustained. We may regard exercise, therefore, as beneficial in both respects, but when it is systematically persevered in, from the continued application of these healthful elements there results not merely the present benefit, but a more or less permanent state of vigour and efficiency, in which the whole system participates.

Hence, springs, also that depends mainly on the healthy state of the bodily organs, an habitual cheerfulness and elasticity of the spirits: the connection indeed between buoyancy of temper and exercise is no less than that of cause and effect: while it is far too well known to require proof, that a sedentary life begets melancholy and irritability.

We will mention one more consequence of the healthy condition of the blood, resulting from exercise; because it may serve to dispel an illusion to which reference has already been made. It appears that the activity of the brain and the clearness of its perceptions, depends on the presence of oxygen in the blood which is applied to that organ. This oxygen is incorporated with the vital

fluid, as we have shown repeatedly, by exercise. Where, then, a frantic effort is made at intellectual employment to the exclusion of physical exertion, the very haste defeats itself: the brain becomes less and less equal to the due performance of its functions, so that in children the forcing process which is too frequently adopted is not only debilitating the body, impairing both the vigour of particular organs, and the system at large, and laying deep the foundation of future disease—but it fails essentially in the very object which it wishes to promote: the mental energies are exhausted, and the thinking powers attain a dulness which may linger upon them for years.

THE INSTRUCTOR.

THUS far, then, we have shown the vital importance of exercise, and the incalculable benefits with which, under favourable circumstances, it is associated ; each one constituting a weighty argument for recourse to the natural method of acquiring health and vigour, and for perseverance in it.

But here a question may arise: and it is of primary importance that it should receive attention. In the first place it might be inquired, Why not follow out nature's arrangements, and pursue her own method, without recourse to art ? Why not indeed ? So far from wishing to waive the question, we are desirous of investigating it fully, because this course will lead, more than anything else, at once to place the whole subject in a proper light, and to elucidate the true position of the Instructor.

Now, what is meant by following out nature's arrangements? What are the indices of her intentions, and in what direction do they point? The answer is embodied in the previous dissertation on the physiological economy of the body. It is evidently intended for exertion, and health is indissolubly connected with it: this exertion is to be taken in the open air, and that constantly and without intermission: this being the case, not only is the general health preserved in its integrity, but it becomes strengthened and consolidated, and almost approximates to perfection: moreover, each several organ and muscle not only retains its function in a state of unimpaired efficiency, but attains a progressive improvement, and an established vigour. But let the exercise be interrupted for a time, and what is the result? Let us look first at the individual functions and organs, and by reading the fate of one in the other, we shall arrive at the general condition of the whole. A muscle, for example, when the accustomed exercise is discontinued, is affected in two ways. First, the more languid circulation does not carry off, as it was wont, the *effete* and useless particles for which there is no further occasion; so that the substance of the

mass is deteriorated in quality, and clogged and impeded by the absolutely prejudicial matters which surround and embed it, more or less : then secondly, the effects of the oxygen which should have been communicated to its substance, as before specified, are wanting ; and the result is, on the one hand, the loss of the healthy stimulus which afforded the capability for exertion, and a feeling of lassitude and debility ensues ; but, on the other, the capability of appropriating the ingredients for the growth and repair of its structure, which resulted from the presence of the same agent, is also diminished or lost, and weakness not only continues, but increases ; which is of the more importance in young persons, as all the stimulus of the system, and all its nourishment, are needed to provide for growth : but it appears that the one is more liable to derangement than the other, for many of the youth of both sexes continue to grow taller in the midst of the most abnormal and unnatural confinement ; but their lean and emaciated appearance tells a sad tale of the debility of the system at large.

We thus come to regard other parts of the structure, in order to arrive at the effect produced on the general economy of the frame by the loss of

wanted exercise. We have just shown, that the muscles specially employed in it suffer from the want of the genial elements constantly supplied by the vigorous and rapid circulation of the blood: not only are these elements less attracted to it, in consequence of its inactivity, but the remote, as well as the proximate causes of the well-being of the organ, are diminished; the respiration, on which due circulation depends, is no longer quickened by even partial exertion of the body—and all parts, as depending on it for a due supply both of activity and nourishment, suffer more or less acutely. The digestion is imperfectly carried on; and the due supply of nutriment being withheld, of necessity a state of weakness follows, which increases unless otherwise counteracted; while just in proportion to the accumulation of deleterious matters, a partial or general derangement of the system follows, and even assumes a permanent form. The amount of these evils, then, will depend, *cæteris paribus*, on the amount of trial which the various functions have undergone. If a child, after quaffing the fresh breezes of the country, in unrestrained liberty and sufficient exercise, during the whole period of infancy, have attained a robust vigour and

hardihood, although by subsequent confinement and forced constraint, it should begin to droop—although the energies of the system should be diverted from exercising their rightful and invigorating power upon the whole constitution, and the development of the bodily organs and powers—and the symptoms of declining strength should set in, yet it will be safe in general, for the purpose of restoring the child to health and vigour, to have recourse again to unrestrained liberty in roaming over the mountain and valley, where before, health became incorporated with his frame. There are present the elements of robustness, and the fully-formed muscles, although somewhat shrunk and weakened by his recent inertness; and in a few days, or in favourable cases a few hours, of acclimatization, and transition, in which there may be little absolute capability for exertion, the system will regain its tone, and the muscles their vigour, and nothing remain but to gain the same health as before, and by the same means.

But in another instance there would be a wide difference. Should the previous benefits have been more limited both in time and extent, and the subsequent exhaustion more protracted and serious,

it would be far from prudent at once to adopt the course of committing the invalid to a country ramble. Unless in the mildest season of the year the exposure either to cold or heat for a continuance, would alone be sufficient to cause serious injury, while debility would render exercise to any great extent impossible. There must be a gradual process of initiation before this can be attempted, and the more practised the eye that directs such exercise, the more experienced and skilful the mind that modifies the varied trials of strength, the more reason is there to anticipate a speedy and complete restoration; so far as to allow of resort to ulterior measures.

And how does this bear upon the condition of the generality of young persons in our towns and cities? does it apply to a large proportion of those who through, we had almost said, the unfortunate affluence of their friends, are early engaged in intellectual pursuits? Without being alarmists, we cannot refrain from a candid and decided opinion that what we have hitherto been urging, tells unfavourably in every particular. Neither have they the good foundation which the out-door life of the country would have given, nor, consequently,

any stamina to withstand the noxious effects of early study and confinement. A week or two at the sea-side in the autumn is as insufficient to infuse health for the future year as is the food received during that period to sustain life till the arrival of the next season. It is true that there are many examples, especially among boys, of constant and uninterrupted health: they naturally indulge a restless craving for exercise, and in active sports acquire the vigour which art has to supply in other cases. But even here the inconstancy of youth calls for supervision, at least during a part of the time devoted to the cultivation of the physical energies, since nothing but the systematic and persevering continuance in these exercises produces the permanent and life-long effect which is desiderated. On the one hand, a preference for particular sports in which there is little or no benefit, or on the other, an occasional press of school business, will let the body relapse into more or less loss of vigour, and this is peculiarly undesirable while young persons are growing. Every such relapse, when allowed to any great extent, tells on the health of the future man: there should be on the part of educators the same

anxiety to perceive constant and progressive growth and increasing strength, as to promote intellectual advancement: it should be remembered, that not more certainly does the temporary abandonment of study both obliterate previous acquisitions, and induce a difficulty in returning to literary labour—than does a casual neglect of physical training, on the one hand, neutralize previous beneficial acquirements in strength and vigour, and on the other, produce a difficulty in the legitimate use of the corporeal organs, as well as a positive incapacity for their employment to any great extent. Indeed the one case is an apposite illustration of the other.

Would it be safe, then, in the generality of these instances to leave those whose whole life has been a violation of the intentions of nature, now suddenly to undertake a life of continuous exertion? Certainly not. The exhaustion attendant on such a sudden change would probably prove fatal. If the change is to be made at all, there must be a gradual preparation for it. It is a consoling reflection that the artificial life which is necessary in some degree, in a state of civilization, is accompanied with sufficient advancement in art to modify and palliate

some of its evils. But the real answer to the question, Why cannot nature be left to herself? is found in the fact that no one is willing to allow it. All that is meant by the phrase is, why should not the natural remedies, air and exercise, render even a sedentary life compatible with health?

This places the matter on a new footing. There is no doubt that they prove insufficient for the task in very many cases of this description; but in whatever way this be explained, it makes for our assertions equally. If it be said they have not a fair trial—that the young persons in question omitted this part of their daily duty, and that, not once or twice, but repeatedly, it only proves what we before said respecting the advantage of an instructor. If, on the contrary, after regular and conscientious exercise, the strength does not improve, nor debility appear diminished—if labour be still an intolerable burden, and the disinclination for exercise of every kind continue in spite of every effort, then it is evident that the health has been too long neglected to become restored by ordinary means; above all, this state of the constitution must not be neglected—it is easy to yield to it, but it speedily ends in consumption. The rational

method of dealing with it, is to let medicine do her part, and then gradually to renovate the powers of nature by gentle exercise, and at the proper moment adopting such a series of Calisthenics, as shall both improve the health, and by its regularity and adaptation to the circumstances place such vigour as is attained on a sure footing.

But there is a further reason why nature is not self-sufficient after being so long tampered with. The constrained and artificial state of life has a strong tendency to produce deformity. If ever there was a case wherein the principle "*Principiis obsta*," was important, it is here. To adopt a proper course of exercises on the first appearance of any approach to an abnormal structure, is in many instances to cure it: to trifle with it, or leave it to itself, is to increase the evil, and after a time to render it incurable. But we shall again revert to the subject of the correction of deformity. It may be said that these cases are rare, why mention them? This is unfortunately untrue. The successful treatment of such large numbers in the first stages, disproves the assertion. We mention it, in order that the prejudice, which often prevents the employment of experience and skill at the only

time it is of any avail, may give way before a reasonable statement of the case. On this ground, therefore, it is generally advisable to have recourse to the assistance of an instructor. Where there is perfect health it is increased, and the constitution confirmed; where there is partial or general debility it yields to vigour and health. Above all, where there is a predisposition to deformity, if undertaken in time, it is remedied and corrected.

It is not too much to say, that while accident and violence, and natural misfortunes are the apparent causes in very many instances, the real cause is weakness and debility; without this the other causes would often have produced a merely temporary effect: while in the absence of aught besides, this simple want of vigour is frequently sufficient to rival all other causes whatever in its deleterious effects. It is impossible to discover the exact amount of its influence; but it is not too much to say, that taking into account the cases where it operates as a sole cause, together with those where it is accessory, it entails as many evils as all the rest put together. Prevention, then, consists in the care and attention of an experienced tutor. Still further, there is not sufficient steadiness and sobriety during childhood

to allow of such important matters being left to the children themselves; it would be extremely improbable that the exercises would receive proper and continuous attention: they must assume an important character, such as generally attaches to matters of instruction, and the weight of authority must be resorted to, with however much kindness it be conjoined.

THE TIME AT WHICH THESE EXERCISES SHOULD BE COMMENCED.

IF children are leading a country life, and air and exercise constitute an important part of every day's employment, the end of these exercises will be to direct the formation of the muscular frame, to counteract abnormal predispositions, and above all, to correct the clownish, uncouth method which clings to every action.

Attention cannot be paid to this point too early. The bearing and deportment will be as important in polite society, as will the health in the general concerns of life. It will be desirable, then, in early childhood to aim at conjoining the vigorous and muscular frame of the rustic with the polish and refinement of civilized life; it may not be too late in after years, but what is to be unlearned is always

an impediment to the subject which is in the process of being learnt.

If, on the contrary, school and study form the essential element in every day ; exercise being subordinate or altogether neglected, and fresh air scarcely thought of, unless during a month by the sea-side in the autumn, in this case, Calisthenics have a double purpose to serve : they must supply both vigour and elegance. The former ground is sufficient to show the advantage of early training ; every year, nay, every month, tells upon the future man ; his health now is the germ of his health then. The child whose incessant ailments resulting from confinement are now disregarded, will assume the form of a confirmed invalid, and whether business, or literature, or fashionable life be his future course, he is alike incapacitated for distinguishing himself. The little girl whose pale face tells of the effect of physical debility even so far, if care and the doctor continue to keep death at a distance, will only exist as an object of pity ; either under constant treatment, or altogether laid by ; utterly unfit for the active duties of life ; totally unequal to the social and philanthropic charities in which she might otherwise have reaped pleasure, and conferred

benefits on others; condemned indeed to the sick chamber, instead of moving in an extensive circle, the centre of joy and happiness to thousands. To say nothing of the nervous irritability which mars the comfort of many such, who would in health have exhibited constant serenity and cheerfulness,—to say nothing of a thousand imaginary evils into which they are ever falling—diseases, illness, danger, accident, and death itself—to say nothing of the impossibility of peace in such a life, it is this class of persons which pre-eminently furnishes victims to the curse of our variable climate—decline. The earlier therefore this systematic exercise is entered upon the farther are children removed from the probability of consumption, and such evils as have been portrayed.

DANCING.

IN connection with this part of our subject, we shall introduce a few observations on Dancing. It is not mentioned among the subsequent Calisthenic Exercises—not because it is of slight avail or trivial import, but because its importance is such, to say nothing of the general acquaintance with the art—and it has so universally received attention at the hands of every nation civilized and uncivilized, that it has outgrown its connection with this or any other subject, as a mere accessory, and has vindicated its claim as a separate and distinct branch of art.

We need not enter into a laboured defence of it. This the wisest and best men upon the face of the earth have done, they have discriminated between the use and the abuse; they have delivered it from its isolated position as the only one of the liberal arts which was passed by and discountenanced, because,

forsooth, it was sometimes carried to excess. The wisest man whom the world has known, and he too inspired, in declaring that there is a season for every purpose under the sun, specially enumerated a time to dance.

We might adduce the example of one, who was perhaps the most eminent divine of Scotland since the Reformation, and who regularly encouraged dancing, as a social recreation, in the manse. Prejudices are often a long time in being rooted up, but they must ultimately give way before enlightenment and truth.

The benefits of dancing are manifest, and as numerous as they are clear and indisputable. Moving in measured time and graceful evolutions to the sound of music, is as natural as music itself; it is a part, in fact, of the nature implanted by the All-wise and Beneficent Architect of the frame. There is a hilarity and joyousness in the recreation, which none other equals, and it possesses the distinguishing feature of combining this with physical improvement and invigoration.

Again, it is the essence of elegance in action—the poetry and music of motion—the regulation of the external and material by the harmonious

cadences of the soul's loftiest creations and most aspiring flights.

This art, like all others, in addition to the momentary results of its being inculcated, after some repetition causes its canons to assume a practical and continual influence on the mind itself. In the same manner a painter, when copying from one of the great masters, produces a twofold effect, he not only eliminates the beautiful upon the canvas, but he is imbuing his soul, and enlightening his conception, with the lovely and sublime. Thus, in dancing, the notion of elegance and symmetry becomes increasingly developed, while the bodily motions participate, of necessity, in the harmony and grace that animates the soul. In addition to the pleasure with which it is invested, as an amusement and accomplishment, no less than a hygienic exercise, it tends, as the experience of many ages confirms, to impart to the carriage and deportment the easy grace and noble bearing, which at once distinguishes the noble from the boor.

At what period of life, then, should these qualities be embodied with the "personnel." Assuredly, at the time when the mind, no less than the body, is peculiarly plastic and open to such impres-

sions, and pre-eminently qualified for being moulded into good or bad tendencies; it is from such seasonable and early attention that they grow up into the system, and become indeed a second nature. An attractive and handsome *physique* is a great advantage, no doubt; but who is it in company that elicits general admiration? which of the "lords of the creation" is it that receives the universal meed of attention? whose company is a guarantee for courtesy and satisfaction on all sides? Without doubt it is the man of polished manners and elegant address. A recruit could not demean himself with anything like such gracefulness and politeness. It is evidently the growth of years, the result of early initiation; without this, the ease and facility, which is the mainspring of the whole, could not have ripened into such maturity. So again, many a lady, whose general appearance, on some stray observation, would warrant the notion of elegance and refinement, needs only to sit down, or ride, or walk a few paces, to prove to every one who has a claim to an atom of discernment, that she is a stranger to grace and elegant demeanour; it is as fatal to all pretensions to gentility, as would be a few words which violated half the rules in

syntax to the notions of education, which a partial view of the face might have suggested. I am glad to find Addison confirming these sentiments in the "Spectator," No. 334. "It is very natural to us to take, for our whole lives, a light impression of a thing which, at first, fell into contempt with us for want of consideration. The real use of a certain qualification (which the wiser part of mankind look upon as, at least, an indifferent thing, and generally, a frivolous circumstance), shows the ill consequence of such prepossessions. What I mean is the art, and skill, accomplishment, or whatever you will call it, of Dancing. I knew a gentleman of great abilities, who bewailed the want of this part of his education, to the end of a very honourable life. He observed that there was not occasion for the common use of great talents; that they are but seldom in demand; and that these very great talents were often rendered useless to a man, for want of small attainments. A good mien, a becoming motion, gesture, and step, is natural to some men; but even those would be highly more graceful in their carriage, if what they do from the force of nature, were confirmed and heightened from the force of reason. To one who

has not at all considered it, to mention the force of reason on such a subject, will appear fantastical ; but when you have a little attended to it, an assembly of men will have quite another view ; and they will tell you that it is evident, from plain and infallible rules, why this man, with those beautiful features, and well-fashioned person, is not so agreeable as he who sits by him without any of those advantages. When we read, we do it without any exerted act of memory that presents the shape of the letters ; but habit makes us do it mechanically, without staying, like children, to recollect and join those letters. A man who has not had the regard of his gesture in any part of his education, will find himself unable to act with freedom before new company, as a child that is but new learning would be to read without hesitation. It is for the advancement of the pleasure we receive in being agreeable to each other in ordinary life, that one would wish Dancing were generally understood as conducive, as it really is, to a proper deportment in matters that appear the most remote from it. A man of learning and sense is distinguished from others, as he is such, though he never runs upon points too difficult for the rest of the world. In like manner, the reaching out of

the arm, and the most ordinary motions, discover whether a man ever learnt to know what is the true harmony and composure of limbs and countenance."

Again, No. 466. "As all art is an imitation of nature, this (Dancing) is an imitation of nature in her highest excellence, and at a time when she is most agreeable, ... under favour of the soberer part of mankind, I think they have not enough considered this matter, and for that reason only, disesteem it."

Locke, again, corroborates these sentiments, and lays due stress on the importance of beginning early. "Nothing appears to me to give children so much confidence and behaviour, and so to raise them to the conversation of those above their age, as Dancing. I think they should be taught to dance as soon as they are capable of learning it; for though this consists only in outward gracefulness of motion, yet, I know not how, it gives children manly thoughts and carriage more than anything." And still farther, "Dancing being that which gives graceful motions to all our lives, and above all things, manliness and a becoming confidence to young children, I think it cannot be learned too early, after they are once capable of it.

"But you must be sure to have a good master that knows and can teach what is graceful and becoming, and what gives a freedom and easiness to all the motions of the body. One that teaches not this, is worse than none at all; natural awkwardness being much better than uppish affected postures."

These opinions have found honest supporters among the philosophers of all ages. Not to quote Plato, Xenophon, Aristotle, Athenæus, &c.—nor to mention the fact, that the philosophers, Aristippus and Aristides, did not think it beneath their dignity to give public exhibitions of their skill in the art—we will merely relate the reasons which Socrates gave for his imitating such conduct. In his old age he often resorted to the gymnasium, where Dancing was taught; and on one occasion having joined in the amusement, it provoked the risibility of his friends. "You laugh," said he, "because I pretend to dance like young people. You think it, then, ridiculous in me to wish for the benefit of exercise, as necessary to the health of the body, as to the elegance of its deportment? Am I to be blamed for diminishing the corpulent state of my body a little, by Dancing? You do not know, perhaps, that Clarmidas, who is here, found

me this morning, in the very act of Dancing, at my own house?" "It is true," says Clarmidas, "and I was so much astonished, that I apprehended your reason was impaired; but after hearing your reasons, I was so convinced by them, that the first thing I did on returning was to follow your example."

Demetrius the Cynic was long opposed to the art of dancing, and asserted that it was made up of motions both fantastical and unmeaning; but on laying aside his prejudices, so far as to judge for himself, he publicly renounced his errors. Timocrates, another philosopher, on witnessing Dancing for the first time, also found his preconceived notions melting away before an honest investigation into the merits of the case. "What an exquisite enjoyment is this," he exclaimed, "which I have so long sacrificed to the false pride of philosophy." Lucian, indeed, was so ardent in his admiration of Dancing, that he collated all the instances of the illustrious who had patronized it in all ages. He adduces an instance from Homer, which will illustrate what we have before said as to its infusing grace and elegance into every motion of the body. "Menon, one of the Grecian heroes, is honourably

distinguished by the name of the Dancer ; and not only were his own party acquainted with his high attainments, but the Trojan enemies could at once detect his presence in the midst of a host, by the superior agility and gracefulness in every motion, which had been gained by long practice in the dance." It is remarkable that even a slight trait like this should not have escaped the accurate discrimination of the blind bard ; it shows strikingly, that this grace and elegance are no imaginary or adventitious accompaniments of the art, but that this is the natural method, which in all ages has brought the motions of the body to perfection.

Without dwelling particularly on the mention made in the New Testament of this amusement, where the Great Teacher himself represents a good and virtuous old man as giving vent to the fulness of his joy, by enacting a scene of festivity in his household, wherein dancing is specially referred to, we will, in addition to the modern authorities already quoted, give one or two extracts from late divines of eminence. Channing thus writes : "Dancing is an amusement, which has been discouraged in our country by many of the best people, and not without reason. Dancing is asso-

ciated in their minds with balls; and this is one of the worst forms of social pleasure. The time consumed in preparation for a ball, the waste of thought upon it, the extravagance of dress, the late hours, the exhaustion of strength, the exposure of health, and the languor of the succeeding day—these, and other evils connected with this amusement, are strong reasons for banishing it from the community. But Dancing ought not, therefore, to be proscribed. On the contrary, balls should be discouraged for this, among other reasons, that Dancing instead of being a rare pleasure, requiring elaborate preparation, may become an every-day amusement, and may mix with our common intercourse. This exercise is among the most healthful: the body, as well as the mind, feels its gladdening influence. No amusement seems more to have a foundation in our nature. The animation of youth overflows spontaneously in harmonious movements. The true idea of Dancing entitles it to favour. Its end is to realize perfect grace in motion; and who does not know, that a sense of the graceful is one of the higher faculties of our nature?

“It is to be desired that Dancing should become too common among us, to be made the object of

special preparation, as in the ball; that members of the same family, when confined by unfavourable weather, should recur to it for exercise and exhilaration; that branches of the same family should enliven in this way their occasional meetings; that it should fill up an hour in all the assemblages for relaxation, in which the young form a part. It is to be desired that this accomplishment should be extended to the labouring classes of society, not only as an innocent pleasure, but as a means of improving the manners. Why shall not gracefulness spread through the whole community? From the French nation we learn that a degree of grace and refinement of manners, may pervade all classes. The philanthropist and Christian, must desire to break down the partition walls between human beings in different conditions; and one means of doing this, is to remove the conscious awkwardness, which confinement to laborious occupations is apt to induce. An accomplishment giving free and graceful movement, though a far weaker bond than intellectual or moral culture, does something to bring those who partake of it, near to each other."

These opinions are worthy the world-wide fame of their writer. Without joining in his sweeping

denunciation of what is but the same thing in a little more formal and unusual cast—a kind of fête that requires more preparation than for every day—we may still heartily concur in the honest avowal of belief in the benefits of that which is among the most effectual means which Heaven has provided for dissipating the melancholy and carking care which the concerns of the world are ever bringing with them. Perhaps there never was a time when these remarks of Dr. Channing, and kindred spirits, were so nearly realized, especially in Scotland. With all the severity of creed, and punctiliousness of religious observance, which honourably characterize the people, there is a universal love of Dancing, not generally in the formal and unnatural style which has just been condemned, but in the natural and spontaneous gaiety of the social circle. Expensiveness, and laborious preparation, and late hours, are no longer the necessary concomitants; but an evening is considered all the more agreeable and pleasurable, from the very spontaneity and unexpected character of its amusements.

The next extract is from Dr. Fordyce, whose broad and liberal principles were alone equalled by his eminently practical tendencies. In his Sermons

to young women he says, "For my own part I must acknowledge I can see no reason for declamation against the moderate and discreet use of Dancing. To everything, says Solomon, there is a season, and a time to every purpose under heaven ; among the rest—a time to Dance. Even those pursuits which all approve, and approve most highly, may be abused. Nothing is exempt from snares ; but one of the worst is a disposition to be peevish, illiberal, and unsociable. In the Jewish institution, it is well known, the exercise in question was adopted into their religious worship itself. It is yet more remarkable that, in the Parable of the Prodigal Son, our Saviour mentions Dancing as making a part of the friendly and honest festivity indulged in on his return. The single instance recorded in the New Testament, wherein it was perverted to a pernicious purpose, has been weakly urged against a practice that, used with temperance and prudence, is certainly adapted to promote health and good humour, a social spirit and kindly affections between the sexes, with that easy graceful carriage, to which nature has annexed every pleasing perception in the beholder. With respect to this last, it seems to me that there can be no impropriety

in it, any more than in modulating the voice, in the most agreeable tones in singing; to which none I think will object. What is Dancing, in the best sense, but the harmony of motion rendered more palpable? Awkwardness, rusticity, ungraceful gestures, can never surely be meritorious. It is the observation of a celebrated Philosopher, who was deeply skilled on most subjects, that 'The principal part of beauty is in decent and graceful motion.' And here one cannot help regretting that this, which may be considered, in some measure, as the virtue of the body, is not oftener seen in our country, as if the sole design of Dancing were to supply the amusement of an hour. A modest, but animated mien, an air at once unaffected and noble, are, doubtless, circumstances of great attraction and delight. I said, a modest mien, for that must never be given up. . . . I freely confess that I am one of those who can look on with a very sensible satisfaction, well pleased to see a company of young people, joyful with innocence and happy in each other. If an exercise so sociable and so enlivening, were to occupy some part of that time which is lavished on cards, would the youth of either sex be losers by it? I think not."

So much for Dancing in its ethical tendencies.
As to its beneficial effects to mind and body, in fact
to the whole man, as a branch of Calisthenics, its
virtues are unchallenged.

PRELIMINARY REMARKS ON THESE EXERCISES.

A FEW remarks will be necessary before entering upon the exercises. When they are resorted to, as they often are, by the advice of physicians as a restorative to health, some discrimination will be necessary, to prevent their doing more harm than good. If a child of robust health undertakes them, or an older person, there is little risk of injury. But in ill health the very anxiety to adopt sanative measures often recoils upon itself. The exercises then must be very gradually undertaken in these cases: indeed on the first occasion so little is advisable that it might be almost derided as a homœopathic dose; but after an interval of repose, and perhaps some strengthening medicine, the labour may be gradually increased, still guarding against

such over-exertion as must inevitably result in a reaction which may retard convalescence to a serious extent.

So also with respect to the instruments employed. The test for their weight or strength must not be the will of the pupil or patient, but his capability for exertion. Nature will not be hurried in her operations; she must have time; and it is only her gradual building that stands surely. The undue straining, when without preparation preposterously heavy weights, or strong instruments (the chest expander for instance), are resorted to, is so far from invigorating the limbs employed, that it positively debilitates them; and it is well if no more serious results follow. Be it remembered then, the vigour of the pupil must determine the kind of instrument: the instructor is the most competent judge on the matter, at least his daily, his hourly experience qualifies him for the task.

Let it be also borne in mind that there is no royal road to health and vigour—no panacea or *elixir vite*. Steady, continuous, uninterrupted exercise is nature's method. It will not be by the swing of the dumb-bells, nor by the flourish of the

baton, nor by the frantic tug at the chest expander, that firmness of muscle will set in, and emaciation disappear. There is no magic in these exercises or any other. But there is an accession of strength, small though it be, which one day's exertion will produce, and the following day increase twofold ; so that result being built upon result, stone upon stone, day by day, after a while a firm and compact edifice will be reared, and health inscribed upon it. The person who only occasionally brings a stone to the edifice, and then perhaps begins building in a different place every time, is not likely ever to rise above the foundation.

OF THE KINDS OF EXERCISE.

The class of exercises called active, are those by which the body may be moved without any assistance or force but its own, directed with or without the influence of the organs of sense ; being voluntary exercises, they always produce an excitement with more or less effect. Position, Standing, Dancing, &c., are contained in this class.

The class called passive, or communicated, although not, properly speaking, exercises at all,

there being no effort in moving the body, yet perform a most important function,—as they increase the strength and vigour, and form gentle preparatory exercises for the class called active. In this class the body is acted upon and moved by a cause distinct from muscular action, with the exception of a contraction merely sufficient to preserve the body in a fixed position. They develop, in the living parts, a series of impulses calculated to brace and strengthen them, without much excitement. Shampooing, friction with the hand and with the flesh brush, sailing, carriage exercises, &c., may be considered as belonging to this order.

SPANISH EXERCISES.

These are among the most elegant and beautiful appliances of Calisthenics. The intricacy, and yet the perspicuity, which characterizes many of them ; their eminent adaptation to the parts of the body which they respectively call into exercise ; the art which is displayed in their composition—all tend to render them extremely valuable. But while I find no particular difficulty in impressing them on

the memory by oral instruction, where I can illustrate the various positions, and appeal to the faculty of imitation in my pupils, by first assuming the various attitudes myself; I find it a very different thing to embody this on paper, at least so as to be intelligible. On the whole, I have thought it better to confine the selection of exercises to such as are readily appreciable, and easily understood by a plain and simple description.

OF POSITION.

BEFORE beginning an exercise it is absolutely necessary that the pupil should attend to position in order to derive the full benefit; for if the body is not in a proper position, the exercise may do more harm than good.

A standing position may be termed the action by which we keep ourselves in an erect posture. It is impossible for the body to remain long in a standing position, for while in this state it is under the influence of exercise, consisting in one continued effort of many muscles; and besides, on account of the vertebral column being placed behind, all the organs contained in the chest and abdomen are suspended in front of it, and might force it forward were it not for the strong muscles of the back; also, the great muscles that form the support of the hips, keep the pelvis basin, or lower

part of the trunk, from falling or bending forward upon the thighs. Again, the muscles in front of the thighs preserve the knee-pan in its position and keep the knee from bending, while by the muscles along the calves of the legs the ankles are prevented from yielding.

From this view of the mechanism of standing, it will be seen that so many and powerful muscles are exerted in the act, that fatigue necessarily results after a certain time. It is not such a simple matter as it appears: and the expenditure of nervous energy being in proportion to the number and power of the muscles employed, it is evident that the erect position can only be preserved for a limited period without thorough exhaustion.

The rationale of the position of the feet which is directed to be generally adopted, is as follows. The larger the base of support, the firmer and more solid will the position be. The universal principle in mechanism holds here also; the greater the extent of surface occupied by the base of any body, the less probability is there when motion is undertaken, of the vertical line from the centre of gravity falling beyond the base, and the less danger of the equilibrium being lost.

The following is a good position for standing.

The shoulders square (not raising one more than the other) and kept well back. The clavicle or collar bone raised as high as convenient, and the chest well brought forward.

The heels must be together and the toes turned out, the knees straight, the arms hanging in their pendant position with the thumb and fore-finger side of hand turned towards the front, the elbow brought slightly forward. The weight of the body should principally bear upon the fore part of the feet.

The head must be erect and the eyes looking forward; the body must have an erect and firm appearance, although without constraint.

If this position be accurately observed, it will be found that the ear, shoulder, haunch, knee, and ankle, are all in a line.

By this means the spine will be stretched, the head well drawn up, the chin kept in, the haunches raised, the chest thrown forward. This will allow of standing longer without fatigue than any other standing position.

Here let it be remembered as a fundamental rule, that although strength of position is desirable, an

easy gracefulness must not be sacrificed. Indeed, the awkward and constrained position fails as much in point of strength as of ease: the organization of the frame is best consulted when a natural position is resorted to, and it is then best prepared for action. The arms too must not hang as if merely temporary appendages, they must have a free and unconstrained appearance. The position here described will, with moderate attention, secure this end.

POSITIONS IN DANCING.

IN all these positions the body must be kept quite erect, the chest advanced, the clavicle or collar bone raised, the shoulders thrown back, the limbs straight, and the arms in their natural position, (ladies have the fore-finger and thumb occupied in holding out the dress, the other fingers to be neatly grouped together, or the dress may be held between the fore and second fingers, when the handkerchief may be held between the thumb and fore-finger of right hand). The first position in Dancing is performed by joining the heels together and turning the toes back so as to form the feet in a straight line.

The second position is formed by moving the foot sideways from the first position to about the distance of its own length from the heel of the other foot. Of the foot thus placed the heel must be raised and the instep bent as much as possible so as to allow the toes alone to rest on the ground,* the other foot retaining its first position briefly turned outward.

The third position is performed by drawing the foot (say the right) from the second position to about the middle of the point of the left, the feet being joined or kept close to each other so that the heel of one foot is brought to the ankle of the other ; in this position the feet are half crossed.

The fourth position is formed by moving the foot forward about its own length ; during the motion the heel must be kept forward, while the toe is kept backward. The one foot must also be directly opposite to the other, and the foot in front resting on the toes alone, the heel being off the ground.

The fifth position is formed by bringing the foot back from the fourth position ; the heel of the one

* It should be remembered that the ankle must be thrown back, so as to allow the sole of the foot to be seen by a person in front. The very ungraceful position often taught, is exactly contrary to this.

foot to the toes of the other, the feet being together and completely crossed.

In all these positions, the foot that the body rested on principally, retains its primitive position, being turned outward.

The positions should first be practised with the right foot, and then with the left.

In the above positions, I have endeavoured to make them as plain as possible, with the intention that they may prove of use to many of those who have either learned them imperfectly, or not at all; and I trust they are in sufficiently simple language to be understood. They must, however, be more simple for a beginner, than the way a certain author has given them. In a work for the use of beginners, he says, of the fourth position:—

“This position is done by making the grand battement with the right leg, directly forward, to the time of a crotchet, holding the leg fully extended in the air, to the time of another; and then making a *coupé* to the time of a third, by placing the points of the toes of the elevated foot in a direct line forward from the other, and resting to the time of a fourth crotchet.”

EXERCISES FOR THE FEET.

BENDS IN POSITION.

BENDS, when executed correctly, do an immense good, giving pliability to the limbs, and to the hips and knees in particular.

In bending, the knees must be turned outward, and rather backward, the heels kept on the ground, and the body quite erect. This also imparts flexibility to the instep.

At first, the knees only require to be slightly bent, and the pupil may, until considerable proficiency be acquired, be supported with both hands, then alternately with each, against some fixed object.

This exercise may be gone through in each of the positions. To be sure that the exercise is performed with the body erect, the pupil may stand close to the wall and bend, keeping the head and spine to the wall while it is performed, with the heels on the ground. When the bends can be performed in the different positions without any support, the pupil may conclude each exercise by rising on the toes, which strengthens the ankles.

BATTEMENTS IN POSITION.

Battelements require great perseverance and study before they can be performed without discomposing the proper state of the body and arms. They consist in raising one foot in the air, while the support of the body is dependent upon the other.

STANDING, SITTING, RIDING, LYING IN BED, &c.

STANDING.

IN standing, the body should be erect, without stiffness, the head upright, yet easy. Persons standing on both feet often rest more weight upon the one than the other; hence, when this bad practice becomes habitual it causes an inclination of the back, which may become permanent, by producing a depression of the intervertebral substance on one side of the body, and the enlargement of it on the other. In this case also, a reverse system of standing may have a sanative effect, but to be of service it must be rigidly enforced. Young ladies, particularly if standing at lessons, relieve themselves by passing one hand round the back as a means of supporting it, and they thereby draw down the opposite elbow, and consequently the opposite shoulder.

OF SITTING.

Many serious consequences arise from the neglect of sitting properly, which circumstance leads me to advise all parents and those in charge of children to attend to it assiduously.

By sitting chiefly on either side of the pelvis, or basis of the spine, it takes a lateral curvature; also by sitting always on the same side of the fire or window, persons are apt to lean in one direction, thereby depressing the shoulder of that side and raising the opposite one.

Care should be taken not to contract a habit of balancing the body upon one hip in sitting, or of throwing on it the whole weight of the parts above, by drawing the spine to that side, and permitting the head and neck to lean over to the other. This raises relatively the shoulder of the side on which the body rests.

In sitting, the pupil should be taught to rest upon the bottom of the spine, without leaning more on either right or left, the knees if possible to be horizontal with the seat, and the legs in direct angle with the plane on which the feet rests.

OF WRITING AND DRAWING.

Seeing the many bad effects resulting from careless habits in Writing and Drawing at a desk, I am induced to make the following observations:—The body generally is inclined to the left side, the left arm resting on the elbow, whilst the right arm and shoulder are raised for the purpose of directing the pencil, the head being bent down towards the left shoulder. If teachers would inculcate on their pupils this idea, and try to remedy that tendency by equalizing the shoulders; or when advice is of no avail, if they would place a book under the left elbow, it would be attended with much benefit.

OF LADIES RIDING ON HORSEBACK.

Perhaps a hint upon the general mode of riding on horseback may be of value to those ladies who have a desire to improve. I therefore mention that in riding, the body is somewhat similarly twisted, the right shoulder being apt to be thrown upward, and indeed the whole of the right side. The result is a contraction and shortening of that side, at least when the habit has been much

indulged. There is thus suggested a useful remedy for the bad positions which have been contracted, perhaps for years, in standing and sitting, and especially in writing and drawing. The constant use of the right hand also may tend in some instances to the undue enlargement of that side which is thus counteracted.

Let me not be understood, however, as countenancing absurdly constrained motions either one way or the other; even in remedial measures, much more in ordinary practice, there should be as much ease and absence of all constraint as the circumstances render possible.

OF LYING IN BED.

This subject I deem a most important one, especially as we spend on an average about a third of our time in bed, where also during childhood and youth, the growth of the body takes place. Is it not then a most important point to know the wrong position, so that if the bones are growing they may not be prevented from growing in the right direction?

When sleeping on a down or feather bed with

high pillows, as we commonly lie on the right side, the body is not only enervated, but the right shoulder is again raised, so that the tendency to deviation in that direction must be still further increased. The neck will also be turned awry, and the vertebræ twisted.

When two children sleep in one bed, unless they are made to change sides the result is almost invariably that they contract a habit of lying always on the same side of the body, and where this is continued for any length of time it can scarcely fail to produce bad health and deformity.

THE BALANCE STEP, WITHOUT GAINING GROUND.

This step ought to give freedom to the limbs, and when executed with the shoulders kept quite square, is considered the best exercise for learning to walk well. To insure precision the Military Terms are prefixed:—

Front.—The left foot is brought forward the distance of a pace, the knee straight, and the toe and heel about two inches from the ground; the heel of the left foot in line with the toe of the right.

Rear.—When steady, take the left foot back very

smoothly with the toe at the proper angle, the left toe close to the right heel.

The terms, *Front* and *Rear*, will be given alternately, and may be repeated several times till the word *Halt* will be given, at which term the feet will be brought together into the first position.

The balance to be made with the right foot, advancing and retiring on the same principle.

GAINING GROUND.

Front.—On the term *Front* being given, the left foot is brought forward as before, the toe at a right angle, and the foot about two inches from the ground.

Forward.—At this command, the left foot is brought to the ground, being about thirty inches from the heel of the right; at the same moment the right foot is raised in the rear, the weight of the body being altogether upon the left. The body remains in an upright position, but inclining forward, while the head is quite erect.

Two.—At this word the right foot is brought in a line with the left, the sole quite flat, and about two inches from the ground.

Front.—When this word is given, the balance

is commenced with right foot, and carried on as described with the left.

WALKING IN GENERAL.

Walking is, of all exercises, the most simple—the weight of the body resting on the one foot while the other is advanced. It is then thrown upon the foot thus advanced, while the other is brought forward, and so on in succession.

In walking great care should be taken with regard to the uniform position of the feet and legs, the similarity of their action, &c. All deviations from the direct line of the feet advancing, are apt to disturb the equilibrium and uprightness of the body; and if such deviations become habitual, they will probably have the effect of producing some of the many deformities which are common to the spine.

In walking the leg should be bent upon the thigh, and the thigh upon the pelvis. The foot is then carried forward at a sufficient height to clear the ground without grazing it, and then placed so softly on the ground as not to shake or jerk the body in the slightest degree. As soon as the foot which has been placed on the ground becomes firm, the weight

of the body is transferred to the limb on that side, and the foot in the rear is brought forward by similar mechanism.

In walking the most important circumstances are that the body must incline somewhat forward, and that the movements of the leg must spring from the haunch, and be directed straight forward in a free and natural manner.

Daily exercise in walking gradually renders it more easy and agreeable, and inducing its more frequent practice, diminishes fatigue in such a degree that very great distances may be accomplished with pleasure, rather than painful exertion.

Walking is considered very conducive to the health, in accelerating respiration and circulation, and promoting appetite and healthful nutrition.

In walking the leg should be put forward without stiffness to the fourth position, or about the distance of a foot; but there should be no effort to turn the feet much out, as it usually gives the person the appearance of affectation. The arms should be allowed to fall in their natural position, and all their movements and opposition to the feet should be easy and unconstrained.

THE SLOW MARCH.

The Military in this march step forward, first, with the left foot a pace about thirty inches, which is repeated with the right foot, and so on ; with the feet turned slightly out, and placed very softly on the ground to prevent any jerking of the body ; during the march the head is well kept up, and the body balanced.

The Military rule is also that seventy-five paces be taken in a minute.

In the march the weight of the body is brought forward from the heel to the instep, and when the pace is made with the foot, (the left for instance) with the knee straight, the toe inclined towards the ground, it touches before the heel. When set firmly on the ground, the right foot is raised and similarly advanced, inclined, and set on the ground firmly, though softly.

It must be observed that as the toe first touches and last leaves the ground in the march, that circumstance tends to give to it a character of animation and elasticity.

THE QUICK PACE.

In the quick pace it is essential, on account of the increased rapidity of motion, that the weight of the body should be advanced from the heel to the toes, and the sole of the foot project the whole weight.

The body in this march is inclined forward to a greater extent than in the slow pace.

The Military count one hundred and eight paces in the minute in the quick pace.

THE BROKEN STEP.

By adopting the broken step, after a person is a little habituated to it, he may travel, it is said, seven or eight miles in an hour, and continue at the same rate for several hours successively, without being much fatigued. It is merely three quick paces and other three in a slow trot, or jolting pace. The alternate change from the quick step to the trot giving time to the lungs to dilate themselves; while the fact of the muscles and the articulations of the lower extremities, during the quick step, enjoying a momentary repose and acquiring fresh power, accounts for the advantage this step has for going a long distance in a short space of time.

HYGIENIC EXERCISES.

I HAVE given French terms for each of the following Hygienic Exercises, for the purpose of making a difference between them and the others here described. It will be observed throughout the course, that when the left hand alone is exercised, the right foot is brought forward so as to give every muscle in the body the same amount of exertion, and to correspond with the mechanism of nature, without which the equilibrium of the body could not be preserved. A great many imitations of common actions, such as swimming, throwing, mowing, &c., might be introduced into children's games, *e.g.* trades, forfeits, and where these are known, as in many cases they are, the exercises founded upon them are easier of acquisition than most people would imagine—the rude efforts of untutored imitation are thus perfected into grace.

It will be interesting for the reader to know that

these exercises are not merely the result of modern experience, but are selections and adaptations from some discovered upon ancient Grecian sculptures : and adopted by the most eminent Hygienic professors on the Continent, as a means of establishing or recruiting the bodily powers. Hence, they are designated *par excellence* Hygienic Exercises.

The instruments to be used in some of the following Exercises, with their relative weights, are as follows :—

Haltères Courtes.

Dumb Bells.

No. 1,.....	4 lbs.	weight per pair.	
" 2,.....	6 "	ditto.	—
" 3,.....	10 "	ditto.	—
" 4,.....	20 "	ditto.	—
" 5,.....	40 "	ditto.	—
" 6,.....	80 "	ditto.	—

Haltères Longues, or Long Instruments.*

No. 1,.....	4	lbs. each.	
" 2,.....	10	" "	
" 3,.....	20	" "	
" 4,.....	30	" "	
" 5,.....	50	" "	
" 6,.....	60, 80	" "	

* This Instrument should consist of a common iron rod about four feet in length, with a ball of iron or lead at each end.

NOTE.—To make proficiency in the Hygienic exercises, the pupil would do well to commence them with the use of the light weights, and adopt the *heavier* instruments as progress is made.

1. *P. P. or Petit Pas.*—A short step with either foot, leaving the foot behind rising upon the toes, that in front bearing the whole weight of the body.

2. *G. P. or Grand Pas.*—A long step with either foot, leaving the leg behind perfectly straight, and resting the whole sole of the foot on the floor. The knee of the limb in front must be bent, which will allow the body to sink as far as possible.

3. *Coup de poing en l'air.*—*Petit pas* with right foot forward, and left fore-arm raised upon arm, the thumb side of hand to shoulder; at one, raise hand above head and with great force bring back to first position—eight times.

The same to be repeated with left foot and right hand, and finally with both hands.*

4. *Coup de poing horizontal au boxe, G. P.*—Hand shut, with thumb and fore-finger turned

* All the Hygienic exercises (unless marked to the contrary) are intended to be practised, first, with the left hand, while the right foot is taken forward; secondly, with the right hand, when the left foot is taken forward; and lastly, executed with both hands and feet together in first position.

upwards; the elbow well drawn back. At one, force the hand forward with great strength in imitation of boxing; at two, resume first position—eight times.*

5. *G. P. Manivelle*.—Imitate turning a handle. Hand shut, with thumb and fore-finger turned upwards, and elbow drawn back. At one, incline the hand upwards and forward; at two, lower in a circular form, and resume first position—eighteen times.

6. *Moulinet, G. P.*—Swing the right hand in a circle, beginning from the pendant position; the arm is carried upward in front by the side of the head, and downward behind, the object being, in the latter part of this course, to throw it as directly back as possible—twelve times.

7. *Nage du chien*.—Imitation of dog swimming. This exercise only to be done with feet together in first position; the hand plunged forward and brought back forming a circle—the right and left hand alternately—twenty-four times.

8. *Nage horizontal, P. P.*—Imitation of swim-

* This exercise tends to strengthen and expand the chest. In drawing the hand back care must be taken not to twist the shoulders, and to keep the head well back, and the body erect.

ming. At one, move the hand forward till the arm is extended from the chest; at two, (arm still extended) take it to side in a horizontal position with shoulders; at three, bring hand close to chest and recommence—twelve times.

9. *Aimer, G. P.*—Position—hands hanging down by side; at one, take hand forward and gradually raise till it comes opposite to chin; at two, bring back the hand, gradually lowering, and keeping the elbow close to side till the hand reaches position—twelve times.

10. *Disque, G. P.*—Position—hands hanging down by side; at one, with arm extended, bring hand in front of body; at two, carry the hand round the head and across shoulders, finishing in position—six times.

11. *Fléau,* G. P.*—Hold "*Haltères longues*" with the right hand under rod, the thumb and fore-finger being turned to the right—the back of the left hand upwards, with the thumb and fore-finger turned towards right; at one, raise towards the right till the right hand is immediately above the head

* The term fléau shows the origin of this exercise. It is taken from the action of threshing corn, of which it is a fac-simile.

and the left hand opposite to the right ear; at two, swing the instrument across and in front of the body till the left hand reaches above the head and the right hand is opposite to the left ear, and so on,—twelve times.

12. *Balancesz circulaire horizontal, P. P.*—With hands a little apart shut, and thumb and fore-finger turned upwards; at one, swing horizontally with the chest from right side of body to left—twelve times.

13. *Balancesz oblique, P. P.*—Position—hands a little apart and shut—extend above right ear; at one, lower them across the body to the left hip; at two, raise them again—twelve times.

14. *Balancier entre les jambes.*—Position—stand with feet a little separate; at one, stoop the body without bending the knees, and put the hands between ankles; at two, raise them above head—twelve times.

15. *Gladiateur,* G. P.*—Position. — The left hand is brought a little above the head, and about a foot before it, with the elbow slightly bent, the

* This is a very beautiful exercise, and well worthy the most assiduous study. It may be done with two persons, the one facing the other, the one advancing while the other is retiring.

arm forming a bow. The right hand is extended behind and almost horizontal with the shoulder. The head must be well taken back. At one, *vice versé*; the left foot being brought forward, right hand before face, and left hand extended behind. Walk forward the length of the room and retire in same manner, viz., make a grand *pas*, with right foot behind and right hand in front of face, with left hand extended behind, and *vice versé* forty times.

16. *Balancier parallel, P. P.*—Position—Arm above head. At one, take hand as far back as shoulders will permit, and at two, bring hand forward twelve times.

17. *Couronner, G. P.*—In imitation of throwing a ball. Balance the hand forward and back for a short time, raised as high as the ear. When balanced imitate throwing a ball forward with the greatest strength.

18. *Hacher, G. P.*—Imitate casting a stone, by balancing the hand forward and back near the ground, and when balanced imitate casting the stone forward with great strength, allowing the hand to rise till it reaches opposite to eyes.

19. *Foucher.*—This is in imitation of mowing.

At one, *grand pas*, with the body bent forward, the hands a little separate, and towards the right side of the body. At two, the hands are brought round in front, forming a semi-circle to the other side of the body. The *grand pas* is then made with the right foot advancing, and so on alternately until perhaps fifty steps are made.

20. *Lever et assembler*—With instruments.—At one, *grand pas*, and raise instruments above head; at two, lower again, and relieve from instrument; at three, *assembler* (feet together in first position).*

21. *Lever en 1 seul temps*.—This exercise is performed with the feet together in the first position. At one, raise hands above head, and lower again at two.

22. *Lever en 2 temps, G. P.*—Raise hand at one to shoulders, (or with instrument to chest); at two, hand above head; three, lower hand to shoulder; and at four, touch the floor.

23. *Lever en 3 temps, G. P.*—At one, with hand touch the knee; at two, the shoulders; at three, raise above head, and *vice versâ* in descending.

24. *Lever en 4 temps, G.P.*—With instruments.—

* This exercise, and the four following, are invaluable for those troubled with any weakness in the spine.

At one, raise instrument upon knee; at two, upon chest; at three, above head; and at four, take behind shoulders.

In returning, at one, raise above head, then lower to chest, at two; to knee, at three; and upon floor, at four.

25. *Piaffer*.—Feet together. This exercise is performed by keeping the body erect, while the feet are raised alternately, bringing the knee horizontally with the haunch.

After practising on the same spot, walk round the room.

26. *Courer*.—Feet together with body erect; allow knee and hip joints to bend as far as can possibly be done without raising heels off the floor.

27. *Sauter*.—In this exercise imitate *piaffer*; but instead of raising only one foot at a time, jump off the floor, in order to give some exertion to the muscles, and after practising this mode on the same spot, advance and retire with the same movement.

28. *Glisser*.—Position—feet together in first position—advance without raising the feet off the floor.

Slides of the feet alternately, the motions to be

as rapid as possible, and each slide not to exceed an inch.

29. *Marcher sur le points des pieds*.—Walk round the room on the toes with the body kept quite erect, and the hands on the shoulders.

30. *Croiser et ployer*.—Begin with feet together, at one, take right foot out to side (raised off the floor); at two, bring it across the left foot, and sink bending the knees.

31. *Croiser et s'asseoir*.—Put the right foot across the left, and sit down with knees as far separate as possible, and rise without any assistance from the hands.

NOTE.—Each movement, taken separately, is incomplete, relatively to the human mechanism. It is complete and useful only when combined with other movements which form a series, suitable to the strength of the varied organs, and to the constitutional, physiological, and pathological state of the individual exercising.

Now these movements, taken two and two, three and three, &c., give an infinite number of combinations; but to apply them with intelligence, it is indispensable to know well the physiological effect

of each particular movement, and also of each combination, two and two, three and three, four and four, &c. It must not be forgotten that the effect of each movement and of each combination varies considerably, according as the action is produced with, or without any instrument, or with any particular instrument as, for example, the long or short instruments; also, according to the progressively increasing weight of the instrument employed.

All this must be studied not only theoretically, but practically.

To those who can remember the explanations of the *terms*, I give the following combinations of the elementary movements:—

Without instruments.

1. *P. P. Coup de poing en l'air*, third exercise, twelve times.

2. *P. P. Moulinet*, sixth exercise, twelve times.

Avec Haltères Courtes (with Dumb Bells).

3. *P. P. Nage du chien*, seventh exercise, twenty-four times.

4. *G. P. Disque*, tenth exercise, six times.

5. *G. P. Lever en 1 seul temps*, twenty-first exercise, twelve times.

6. *P. P. Piaffer*, twenty-fifth exercise, twenty-four times.

With long instruments.

7. *G. P. Manivelle*, fifth exercise, twelve times.

8. *G. P. Fléau*, eleventh exercise, twelve times.

9. *G. P. Lever en 4 temps*, twenty-fourth exercise, six times.

10. *Lever en 3 temps*, twenty-third exercise, six times.

11. *G. P. Lever en 2 temps*, twenty-second exercise, six times.

Haltères Courtes (Dumb Bells).

12. *P. P. Coup de poing en l'air*, third exercise, twelve times.

13. *G. P. Manivelle*, fifth exercise, six times.

14. *G. P. Disque*, tenth exercise, six times.

15. *G. P. Moulinet*, sixth exercise, twelve times.

16. *P. P. Nage horizontal*, eighth exercise, twelve times.

17. *G. P. Couronner*, seventeenth exercise, twelve times.

18. — *Balancier entre les jambes*, fourteenth exercise, six times.

19. *P. P. Piaffer*, twenty-fifth exercise, thirty times.

Haltères Longue (Long instrument).

20. *G. P. Balancez circulaire horizontal*, twelfth exercise, six times.

21. *G. P. Fléau*, eleventh exercise, twelve times.

22. *G. P. Lever et assembler*, twentieth exercise, six times.

23. *G. P. Boxe en marchant*, fourth exercise, twenty-four times.

24. — *Balancier entre les jambes*, fourteenth exercise, six times.

25. *G. P. Lever et assembler*, twentieth exercise, six times.

26. *G. P. Gladiateur*, fifteenth exercise, twenty-four times.

27. *G. P. Balancier oblique*, thirteenth exercise, twelve times.

28. *P. P. Glisser*, twenty-eighth exercise, twenty-four times.

29. *G. P. Faucher*, nineteenth exercise, twelve times.

CHEST EXPANDER EXERCISES.

THE "Chest Expander" is a new invention which is adopted by some professors, and is eminently useful for invigorating and strengthening the body. But, unfortunately, many deformities arise to persons in the habit of practising the chest expander exercises, from the injudicious application of expanders too strong—which cannot be suited for the practice of weak persons. But from experience I find that the chest expander may be very beneficial when the strength is not above the power of the person engaged. Great care should therefore be taken to provide an expander of the proper strength, or one that can be used in the different movements with ease. The instrument consists merely of a strip of India Rubber, with a handle at each end; and covered with ribbon, both for

ornament and to prevent any evil effects from the possibility of its snapping.

The exercises are performed with the body in an erect position, although the chest may be a little projected forward, and the head drawn back. The expander is held in front between the hands, and supported by the handles. The back of the hands are turned towards each other, the little finger side of the hand being turned to the front;—the heels joined together, and the toes pointed forward.

1. Raise the expander slowly at arms' length, with both hands raised alike, till it comes immediately above the head. Then allow the expander to be stretched, keeping it at arms' length behind the body, until it is below the waist; then raise by similar motion, till it comes above the head, and thence to first position.

2. Commence with expander in front; at one, raise right hand before the chest; at two, carry round left shoulder; at three, the expander is in an oblique position, the right hand somewhat above right shoulder, the left hand near to haunch; at four, the expander is below the waist, the arms being extended.

The expander is brought to the front in the same

manner. At one, raise the left hand above head ; at two, carry round by right shoulder ; three, before face ; and four, into first position.

The same is repeated with the left hand raised first.

3. In this course commence with the expander behind shoulders, the fore-arm bent upon arm, and the back of the hands turned to shoulders. At one, raise expander above head ; at two, lower again to shoulders ; at three, force again the expander above head ; and at four, stretch the expander, and at arms' length take it backwards till it reaches to the bottom of the spine.

Repeat this exercise by raising the expander above head, and so on.

4. First position—(feet together, and expander as in the first exercise)—at one, bend the body forward and downwards, without bending the knees ; at two, without stretching the expander, allow it to touch the ground ; at three and four, stretch the expander as far as possible.

Raise it at one, until it comes opposite to the chest, the body becoming gradually erect ; at two, without stretching the expander, take it above head ; and at three and four, stretch as much as possible.

Repeat the exercise by bending forward body, and so on.

5. Expander held the same way as in first exercise. Raise both hands alike, and take expander slowly over head, counting four, while it is stretched behind shoulders;—rest, counting four; then raise right hand somewhat above right shoulder, while left hand is near the left hip, in this movement count four; reverse the position by raising left hand above left shoulder, while right hand is near right hip—count four.

At one, bend fore-arm upon arm with hands to shoulders; and at two, extend arm sideways, stretching expander—six times over; lastly, bring hands with expander into first position. In this exercise count, including all the movements, twenty-four.

6. With the left hand extended in a line with the shoulder, and the right hand in front and to left shoulder, the eyes looking over right shoulder.

At one, stretch the expander, taking the right hand from left shoulder behind head, (the left arm still extended), and gradually stretch the expander till the arm is quite extended sideways, and in a line with the shoulder; then allow the left hand

suddenly to touch the right shoulder, and the eyes to look over the left shoulder.

Repeat the same by taking the left hand behind head, &c.

7. *Easy Movement*.—With expander behind, the fore-arm bent upon arm, and the back of the right hand to right shoulder, and left hand near to hip.

At one, raise the right hand a little higher than right shoulder; at two, bring the hand back to shoulder—eight times repeated; then the same is done with the left hand to shoulder, &c.

8. *Marching Exercise*.—March slowly round the room, the body to be kept in a proper position—the bust well thrown forward, the head drawn up, the chin pulled in, the expander stretched behind the shoulders, the arms being quite extended.

In marching the expander must not touch the body, but be held as far back as possible.

9. *First Double Exercise*.—This exercise is performed by two persons standing obliquely; they change handles, viz:—the person on the right gives the right handle of his expander to his partner, at same time accepting his partner's right handle—right hands are joined.

At one, take the left hand slowly over head, and

stretch the expander till it comes below waist, counting four; then stretch and raise the expander over head into first position, counting four,—during which time the eyes look over the right shoulder to the joined hands. Repeat same with left hands, &c.

10. *Second Double Exercise*.—One expander is held between two persons, without being expanded, or the person on the right side holds the right handle of the expander with the left hand, while his partner holds the left handle with right hand: meanwhile the second expander is raised above the head and stretched at full length, the person on the right holding the expander with the right hand, and his partner supporting it with his left. The person on the right is looking over his right shoulder to his partner, whose face is turned towards him, the eyes looking over the left shoulder. The feet are in the second dancing position.

The party on the right side having the left foot distant about twelve inches from the right, which is sustaining the whole weight of the body, the heel of the left foot is raised off the ground, and the toes merely touching it—his partner's position being *vice versa*.

After resting in this position two or three seconds, reverse the position, without taking hands off expanders. Turn half round towards partner by degrees, stretching the expander which was relaxed, and slackening that which was expanded, the eyes looking over the other shoulder, and the feet taking the opposite position.

THE ROD EXERCISES.

THE rod exercises having been almost superseded by those of the chest expander, hand exercises, &c., I deem it unnecessary to give more than a few examples. Those described here may be used with great advantage, if only care be taken to preserve the body in its proper position, and not to incline the head forward, while the rod is carried over it from front to back, &c.

The rod for this purpose should be made of light smooth wood, and must be inflexible. The length should not be more than four feet.

First Exercise.—1. Grasp the rod near the extremities with both hands, the thumbs turned inward. Carry the rod gently over the head, and lower it as far as possible behind the shoulders.

2. Raise the rod and carry it over the head into the first position. May be repeated eight times.

Second Exercise.—The same exercise is performed by grasping the rod with the thumbs outward. The thumb and palm being to the front.

1. It is raised parallel with the shoulders, then taken over the head.

2. Conclude this exercise by bringing it back to the original position in front.

Third Exercise.—1. With rod held as in first exercise bring it to a vertical position, the right hand being uppermost and the rod above the head, the left is against the lower part of the body.

2. By an opposite movement, the right hand is lowered and the left raised. Repeat often and quickly.

Fourth Exercise.—1. Hand to be turned as in second exercise, with the palm to the front, and in position; imitate third exercise by bringing the rod to a vertical position with the right hand uppermost, &c.

Fifth Exercise.—1. Raise the rod (keeping it close to the body) from position till it is at arms' length above the head.

2. Lower the rod behind the head as far as possible.

3. Raise the rod again above the head, and lastly, bring it into the first position—four times over.

THE HOOP EXERCISE.

First.—The diameter of the hoop may be as long as from the points of the fingers to the ear of the party practising. The hoop must be strong, so as not to yield during the performance of the different motions of the exercise. A strong cane would be found best for this purpose, and smoothest for the hands.

Commence with the hoop in front of the body, the arms being fully extended and the hands having hold of the hoop on opposite sides; raise it over the head, with the arms still extended, maintaining the same hold as before; then lower it behind the back as far as possible without altering the position of the body, or suffering the hoop to touch the head.

Afterwards bring the hoop to the right side of the body, at the full extent of the right arm, and in line with the right shoulder; the left hand should be then brought to the left side and the arm in a line with the left shoulder.

In concluding this exercise, the hoop is to be brought to the original position.

Second.—Both hands grasp the hoop as in the

preceding course: then raise it to the right side of the body, the left hand touching the right ear, and the right hand in a line with the shoulder. At the same time, turn the head well to the left, the eyes looking over the left shoulder; care must be taken to preserve the perpendicular position of the body.

Next bring the hoop from the right side over the head, and in the same manner when the hoop is brought to the left of the body, the head is turned to the right, the eyes looking over the right shoulder; and lastly, the hoop is brought into the first position.

Third.—Move the right foot about ten inches behind the left, and place it firmly on the ground, at the same time raise the hoop over the head, then allow the upper part of the body to be gracefully bent forward and the hoop made to touch the ground without bending the knees. After a short pause, gently raise the body till it gains the fundamental position, lifting at the same time the hoop above the head. Repeat the same by taking the left ten inches behind the right, &c.

INDIAN SCEPTRE EXERCISES.

POSITION—Feet together, the heels touching and the toes pointed straight forward.

The body erect, and the hands hanging in their natural pendant position, the elbows slightly taken forward and outward.

The sceptre is firmly caught between the thumb and fingers and allowed to hang down, and the end should be grazing the ground.

1. Raise the sceptres gradually, counting one until they reach directly above the head. At two, lower them by extending the arms sideways until they reach the first position—eight times.

2. With the right hand from the first position, carry the sceptre slowly in front of the body—over the left shoulder—allow it to pass behind the body (keeping it as far distant from it as possible), and lastly, bring it into the first position. The same to

be performed with the left hand—eight times over with each hand. Then alternately with right and left—eight times.

3. The sceptre in the right hand is swung in front of body and carried over left shoulder, and hangs perpendicularly on the right side of the spine. The one in the left is carried round in the same manner over the right shoulder, and hangs on the left side of the spine, both sceptres still pendant. The arms are extended outward and backward, then slowly, and without jerking, fall into the first position—eight times.

4. Commencing from the first position. At one, both sceptres are swung with the ends upward, until they are placed vertically, and side by side, with the arms extended, and the hands opposite to the chest. At two they are carried in the position at arms' length to the side, and as far back as possible, still on the same level. Each is then dropped backward until it hangs downward in a vertical position, and is lastly brought into the first position—eight times.

5. Position.—The sceptres in front are held with the ends upwards, the elbows being near the hips, and the fore-arms horizontal. Carry the sceptre

which is in the right hand round the head, and pass it behind the back, then stretch it out to the side horizontally, with the extended arm; lastly, return it to position, same with left and then alternately—eight times.

6. This exercise is the same as the preceding one, with this difference, that the arms no longer act separately, but together. Their motions being blended by the left beginning as soon as the right has described its circle round the head, and forming its own circle during the time the right is extending, and so on—repeat eight times.

7. From the pendant position, swing the sceptre held in the right hand in a circle, by raising the hand upward in front of the body, passing by the side of the head, and downward behind; the object being in this exercise to throw it as directly backward as possible. The same to be repeated with the left, then alternately—sixteen times.

8. At one, make a long step with right foot forward, extend left hand forward, with end of sceptre touching the ground. At two, raise it slowly with the arm still stretched, till the end of the sceptre nearly reaches the ground behind the body. Bring the sceptre back in the same manner, counting two.

Repeat the same with right hand and left foot eight times over.

In this exercise take the head as far back as convenient.

9. The sceptre is grasped as before by the handle, and by the right hand alone; then swung across the body (the end being all the time pointed down). It is then carried round the left shoulder, passing behind the back, and thence brought round the right shoulder into the original position.

Repeat the same with left hand, then with both hands alternately.

MISCELLANEOUS EXERCISES.

First Exercise.—The right arm and right leg forward, keeping the left foot firm on the ground, the right knee bent, the left limb stretched, and the left arm in the rear.

In the first position the arm is extended forward, the back of the hand turned upward, and in a line with the eyes.

The movement of the right foot and arm forward, and that of the left arm in the rear, must be well executed together, and with quickness.

2d. The same exercise performed with left arm and left leg.

3d. Alternate movements.

4th. Both arms at once, first right foot forward, then left.

Second Exercise.—The right hand in the rear,

the arms stretched and kept about two feet distant from the hip: hands closed.

2d. Move the right foot a pace forward, bringing, at the same time, the arm in front, describing a circle, and stretched at full length, the points of the fingers turned downward. In this position the right knee is bent, and the left stretched. The foot, which ought to graze the ground in moving forward and backward, is always put flat on the ground afterwards.

3d. Backward into the first position. In this movement it is necessary to carry the weight of the body on the left leg, and to bring the hand and the foot through the same lines which they have described in moving forwards.

4th. The left arm to be moved through the same exercises, observing the rules explained as above.

5th. Both arms, each describing a circle, are brought to the front; the right foot forward, then taken back to the first position.

The same ought to be done, moving the left foot forward.

Third Exercise.—1st. Stand in an erect position, as has already been described. In the first motion the arm is raised in an extended position to the

height of the head, describing from the knee to the summit of the head, a semicircle, of which the body is the centre.

2d. In projecting the right shoulder forward, the arm is brought gently down to the left side; in this action the body turning a little on the hips, stops in the same direction left, the right hip and knee are bent gently; the left leg is kept quite straight, and the right hand is to touch the ground near the left ankle.

3d. The hand in same place, without changing the position of the body, with the finger on the ground, half a circle is performed from the left ankle to the right, allowing the body to get gradually into the first position. The same is also to be executed with the left hand, then follows the alternate motion, and at last the same exercise with both arms at once.

It is necessary to observe that in the double motion, both arms ought to be raised at once, very slowly stretched at full length to the height of the head, the hands brought almost close together, and the palms of the hands turned towards the front.

From that position, keeping the arms and legs stretched, the body is bent down until the fingers

touch the floor between the toes: the body is then raised up gradually.

Fourth Exercise.—1st. The feet being in first position (heels joined together), bring the hands together opposite to the chest; the little finger side of hand to front, and back of hands touching each other.

2d. Raise the hands as far above the head as possible, the joints of the fingers touching, and the thumb side of hands turned backward.

3d. Extend arms sideways and backwards till the hands are in a horizontal position from the shoulder.

4th. Lower the hands slowly into their natural pendant position. Elbows to be brought forward slightly.

For practice, the eyes should first look over the right shoulder; the second time over the left, and so on throughout the course.

Fifth Exercise.—1st. Arms extended horizontally from the shoulders, quickly bring the hands almost together opposite to the chest (still keeping the arms horizontal from the shoulders). Separate the hands gently in their course sideward, while each hand assumes the shape of a ball, the fingers being neatly grouped together.

2d. The arms are by degrees taken sideways and backwards until they are quite stretched, and in a line with the shoulders.

Sixth Exercise.—1st. Hands extended in a line with shoulders; pass the right hand slowly before the face, and carry it round the head, passing the ear and thence behind shoulders.

2d. The first position to be then gained by extending the arms in a direct line with the shoulders.

Repeat the same course with the left hand.

Seventh Exercise.—Swing the arms forcibly backwards and forwards, equalizing the time, with the hands shut; to be executed first with the one arm only, afterwards with each alternately, and latterly using both at the same time.

In this exercise the shoulder and arm in motion should be kept rather stiff, so as to prevent the articular ligaments from being stretched unduly.

Eighth Exercise.—1st. Lock the arms, *i. e.* the left hand grasps the right arm, just above the elbow, and the right hand is placed under the left elbow, in this position the shoulders must be drawn well back.

2d. Bring the right foot about twenty inches

in front of the left, and place it firmly on the ground.

3d. Allow the body to bend forward as far as convenient, but if possible till the chest rests upon the right knee, while the left knee is kept quite straight.

Repeat, with left foot advanced twenty inches in front of right.

Ninth Exercise. — Feet joined together; toes pointing forward. One, raise both hands in a line with shoulder; then bring the hands in front of the chest with the arms extended, and palms of the hands touching. Two, merely turn the palms of the hands upwards. Three, draw the hands close to the shoulder, the elbows being close to the side. Four, with a jerk, push the hands straight forward. Five, (palms of hands turned still upwards) take the hands to side, horizontal with the shoulders. Six, raise the hands sidwards till they meet above the head. Seven, with arms extended, separate the hands, keeping thumbs back until they arrive in the first position; finally, raise heels off the floor and lower again.

Tenth Exercise.—One, both arms extended in front of the chest, the right foot resting on heel, and advanced about twenty inches in front of the

left. Two, both hands above the head, right foot resting on toes. Three, hands extended sideways to first position, while right foot is brought alongside of left.

Same exercise to be performed with left foot in front; weight of body resting on right foot.

Eleventh Exercise.—THE JUMPING EXERCISE.—This exercise is fraught with more than ordinary benefits to the frame. To attain a moderate expertness and facility in it, involves such health and contractile power in the muscles, such elasticity in the tendons and articulations, of which so many are exerted by the action—indeed such a general efficiency and power throughout the whole body, more or less, that to attain proficiency in it may be almost called synonymous with gaining health and strength. Many persons have, by the aid of this exercise, saved their lives. For instance, it is useful when riding on an unruly horse, or in a carriage, when perhaps at the mercy of an intoxicated driver, and in other circumstances where a jump made with promptitude and assurance might very likely save both life and limb.

Lightness and perpendicularity constitute the whole merit of jumping, consequently pains should

not be wanting to acquire these two qualities, for without them there is neither elegance nor neatness, and probably no security.

To render the jump easy, it is necessary also to fall on the toes, allowing the knees and haunches to bend, by which the fall will be broken and a shock prevented. The body should be inclined forward, and the arms will also serve to break the fall.

NOTE.—It is necessary to take notice, that although a little is said here in regard to jumping, yet, it cannot be recommended for the practice of ladies, owing to the excessive shocks which it may communicate, and besides, as Rousseau says, "Women are not made for running; when they fly it is that they may be caught. Running is not the only thing they do awkwardly; but it is the only thing they do without grace."

THE PREVENTION OF DEFORMITY AND DISEASE.

I HAVE before referred to vigour of body as the great panacea against deformity ; and alluded to the opinion that sheer debility is the most fruitful source of the varied contortions of the human frame. I cannot refrain from reprobating the custom so general in ladies' schools of spending nearly the whole day in inactivity and sedentary occupations. An hour's walk, and that only in fine weather, is entrusted with the preservation of the health which demands as much air and exercise as possible.

I am not fearful of giving offence on this matter. The liberal-minded governesses with whom I have been connected, in every way admirably qualified for their most important duties, cordially sympathize with my views on the matter. It is only a few antiquated establishments where the health is thus

tampered with, and perhaps irremediably injured. I say nothing of their literary merits: they may be as conspicuous as those of the other party: but I do say, a cruel and grievous injury is being (unconsciously, I hope) inflicted on those whose future lives will probably be marred by such injudicious treatment. I speak with the more freedom because I am not personally connected with the abuse, and only hear of it by indirect methods. The heavy doctors' bills, the enfeebled health, and flagging spirits, need no other indices of the bad effects of the system.

Dr. Forbes, in speaking of the bad effects with reference to curvature of the spine, says:—"There is scarcely a girl at a boarding school for three or four years but has impaired health." In one school he examined all the pupils, and did not find one who was not more or less crooked. Times are changed for the better since that was written, and daily progress is being made. Still we see from this, the vast importance of the subject. I have long felt it my duty to pay special attention to it, and the results have answered my most sanguine expectations. There are cases of natural deformity: we can scarcely expect to do more than palliate these

in most instances: for example, the sad distortion of the spine, which is commonly known as hump-back, where there is likewise ordinarily a most unsightly protrusion in front. But lateral curvature is generally amenable to treatment, at the proper time. I have treated elsewhere of the tendency of improper positions in sitting at writing, and drawing, and other positions, to cause this species of deformity. There is not a more dangerous popular delusion than to suppose that the deformity will disappear as the child grows older: that it will of itself grow "small by degrees, and beautifully less." There may have been such cases, but they are rare. The first indication of the malady is generally only the precursor of more extended evils. A double curvature often succeeds the neglect of a simple one, and another is often added subsequently.

The beginning is the time when it is amenable to treatment. I have small faith in inclined boards, back boards, steel stays, steel collars, &c., &c. Their torture generally produces only an aggravation of the malady: besides which, their application to all cases equally with as little discrimination as skill, of itself shows the impossibility of their meeting all requirements.

Nature's method is a due supply of strength : this results from a due supply of well elaborated blood, which exercise alone conveys to the organs. The exercises should only be adopted in the presence, or by the direction of a practised professor, and in the more severe instances at the instance of the family medical practitioner, who is acquainted with the particular idiosyncrasy of the patient.

Friction, and the gradual application of cold water, impart a tone to the muscles of the back : in severe cases a current of electricity also is of great service. Let the general rule be remembered, that nature is to do the work of restoration : her operations are only guided by art. Back boards, &c., are nothing in themselves : restraints and painful positions are prejudicial : the true method, because the one which nature points out, is "freedom from restraint, and well-derived exercises," as the testimony of physicians demonstrates.

It is unnecessary for me to add my testimony to the evils of tight-lacing. I will just enumerate some of them. Headache, giddiness, fainting, swellings, diseases of the heart and lungs, indigestion, atrophy, melancholy, liver and kidney diseases, cancer, &c. These are independent of mechanical

injuries, such as the forcing of the ribs upon the vital organs : but it needs no proof that health is incompatible with such practices.

Lastly, it is a low and impaired state of the health which lays the system open to all kinds of diseases. Infection is more readily imbibed when the energies of the system are exhausted : above all, the cases of cholera are now almost confined to those persons whose health, whether through confinement, or neglect of exercise, or other duties—is in a failing condition. These facts speak loudly for continuous exercise.

ERRORS TO BE AVOIDED.

I SHALL just refer briefly to one or two dangers incident to these in common with all exercises. Though previously mentioned and already known to almost all my readers, yet so great is the want of caution continually met with, and so little do the injuries of others appear to benefit the world at large, that I feel I shall not be discharging my duty faithfully without another warning. In the first place, guard against exposure after these exercises. The danger is well known; and yet when the frame is heated, the cool air is so refreshing that it is courted rather than avoided, until a chill has enwrapped the whole system. A cold is not much, it is said: but one of the most popular writers of the day says with truth:—"Consider it as the cold hand of death drawing you to the tomb."

Inflammations soon carry off their victims, and

no less surely does consumption do its work—both frequently have their origin in a simple cold. Be advised then, and put on at least some additional clothing immediately after the exercises, especially previous to encountering the external atmosphere.

It is of still more importance when Hygienic exercises are undertaken as a restorative, not to suffer the perspiration to clog upon the skin, nor to allow the open pores to be suddenly closed by cold. A copious ablution, with cold water, and then hearty friction with a rough towel, has in all cases a very beneficial tendency. The flesh brush and shampooing are also very useful.

CONCLUSION.

AND now a very pleasant task draws to a close. I earnestly hope that the publication of these pages will result in the continuance of the Calisthenic and Hygienic Exercises, after my instructions are terminated; and that thus I may be the means of imparting a good foundation for health and vigour—for honourable activity, and such enjoyment of life as none but the healthy can aspire to, in the case of very many families. It will be an ample recompense for my studies and labours, when I see such happy results following.

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